



Minto Mine

Socio-Economic Monitoring
Program

Annual Report 2016 to 2018



Prepared in collaboration by Selkirk First Nation, Government of Yukon and Minto Explorations Ltd.
February 2021

COVER PHOTOS:
Government of Yukon touring Minto Mine
Credit: Government of Yukon
Minto Mine overview
Credit: Minto Explorations Ltd.



Pelly Crossing
Credit: Government of Yukon

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Preface

Minto Explorations Ltd. (Minto), the Government of Yukon (YG) and Selkirk First Nation (SFN) – the “Parties” – have the Tri-Partite Socio-economic Working Group (TPWG) and have worked collaboratively to develop the Minto Mine Socio-economic Monitoring Program (SEMP). The Parties developed the program in recognition of their respective roles in protecting and promoting the economic, social and cultural well-being of peoples and communities affected by the development of the Minto Mine. This formal commitment arose out of the Yukon Environmental and Socio-economic Assessment Act (YESAA) decision documents associated with the expansion of the Minto Mine and was formalized by a Letter of Agreement signed by the Parties in 2014 and updated in 2018.

Through the mine’s operation and closure phases, the program is evaluating the effectiveness of mitigation and enhancement measures while managing the socio-economic effects of the mine. When warranted and after the Parties approval, alternative management actions will be brought forth and implemented.

The 2016 to 2018 Report is the third of a series of reports and is intended to be complementary to the previous reports. Those indicators with no new information have not been included in this Report. Please see the 2015 Annual Report Data for the indicators that have not been updated.

Data in this report have been contributed by Minto, YG and SFN. The success of the SEMP has been due to collaboration among the Parties; this collaboration will continue to ensure that future milestones are achieved. The Parties expect this program to serve as a blueprint for effects-monitoring programs in other communities across Yukon.

Disclaimer

This Report is for information purposes only and is made available to you for your lawful and non-commercial use only. Each of Minto, YG and SFN will not accept any liability for your use of this report. The use of this report is at your own risk. This Report was published in 2021 with data current to 2018. Nothing in this Report shall be used as a substitute for independent research or investigations.

Acknowledgements

The Tri-Partite Working Group (TPWG) acknowledges several contributors who made this report possible.

Significant efforts were made by SFN and its TPWG representatives, Lindsay Staples and Lois Craig, in concert with the Yukon Bureau of Statistics, to design and administer the 2015 SFN Household Survey and offer insights on how the results can be utilized. Thanks to Journey Paulus and Jenny Penner of Minto Explorations Ltd. for providing new Minto and contractor information. Thanks to Rachel Westfall of the Yukon Bureau of Statistics for securing and compiling the government data, Rosanna White for Yukon Government and TPWG coordination and Jennifer Russell for contributing mining related data and expertise. Thanks also to Claire Preece for preparing this report.

The report was finalized with substantive contribution and significant collaboration by all the Parties.

The Tri-Partite Working Group

Representatives of the Tri-Partite Working Group (2016-2020) include:

On behalf of Selkirk First Nation

Lois Craig and Lindsay Staples

On behalf of Minto Explorations Ltd.

Deborah Flemming, Jenny Penner, Todd Swenson, Journey Paulus and Lyndsay Brennan

On behalf of the Government of Yukon

Monique Chatterton, Rachel Westfall, Richard Gorczyca, Jennifer Russell, Rosanna White and Jeanette Carney.

Acronyms

CEAA Canadian Environmental Assessment Act
CANSIM Canadian Socio-economic Information Management System
CRA Canada Revenue Agency
CNIM Centre for Northern Innovation in Mining
CWB Community Well Being
EVB Eliza Van Bibber School
FN First Nation
HEO Heavy Equipment Operator
km² Square kilometres
LSA Local Study Area
Minto Minto Explorations Ltd.
NHS National Household Survey
OFN Other First Nations
RCMP Royal Canadian Mounted Police
RSA Regional Study Area
SE Socio-economic
SEMP Socio-Economic Monitoring Report
SFN Selkirk First Nation
TPWG Tri-Partite Working Group
YBS Yukon Bureau of Statistics
YESAA Yukon Environmental and Socio-economic Assessment Act
YESAB Yukon Environmental and Socio-economic Assessment Board
YG Yukon Government
YMTA Yukon Mine Training Association

1 - Introduction

The Minto Mine was permitted in the late 1990s under the Canadian Environmental Assessment Act (CEAA). Since commencing production in 2007, the mine licence has been amended to allow for the mining of new ore bodies. Those amendments were assessed under the Yukon Environmental and Socio-economic Assessment Act (YESAA).

Conditions for the Phase IV expansion project amendment approval included the requirement by YG and SFN to establish a systematic socio-economic monitoring program for the mine.^{1,2}

Minto, SFN and the Government of Yukon have established a socio-economic monitoring framework and program for the Minto Mine through the collaborative efforts of the working group. This framework was amended and approved in 2018.³

The Minto Mine is located on SFN Settlement Land in accordance with provisions in the Selkirk First Nation Final Agreement, and Pelly Crossing is the closest community to the mine. This report, therefore, has a strong focus on Pelly Crossing, SFN and Yukon.

1.1 Purpose of the Socio-economic Monitoring Program

The purpose of the program is to monitor the socio-economic effects of Minto Mine's construction, operations and closure. The program has two components to meet this purpose: a socio-economic baseline and ongoing monitoring against that baseline.

In a socio-economic effects assessment, the baseline provides a benchmark of social and economic conditions at a given point or points in time. Changes in those conditions can be compared and measured against the benchmark. This information helps to determine the direction (positive or negative) and degree of changes (i.e. significance of change) in conditions. It also has the potential to increase the accuracy of future predictions about the effects of development on those conditions.

It is important to note that trends – whether positive or negative – are not necessarily directly connected to the operation of the Minto Mine. Other factors may have a contributing or overriding influence on certain socio-economic aspects described in this report.

1.1.1 Program Timeline

The Parties created the basis for the Socio-economic Monitoring Program through the formation of the TPWG in 2011. In July 2013, Minto submitted its project proposal for Phase V/VI mine expansion under YESAA. In that proposal, the company reaffirmed their commitment to the SEMP, as did SFN and YG in their YESAA decision documents.

The TPWG continued to develop the program framework, which was formally approved by the Parties in 2014 and updated and approved in 2018. The first Minto SEMP 2014 Annual Report was produced in 2016.

The SFN Household Survey of Living Conditions was designed and approved in 2014 and completed in 2015. The household survey by SFN forms a critical part of the efforts to collect relevant and current data at the community level. The results of this SFN Household Survey, anticipated every fifth year, were incorporated in the Minto SEMP Annual Report 2015. As new SFN Household Surveys are completed, the results will be included in Minto SEMP Reports.

Minto's amended Quartz Mining Licence (QML-001), issued in December 2014, includes the first socio-economic requirement attached to a mining licence in Yukon. It requires Minto to implement the socio-economic monitoring framework including reporting. This report is the fulfillment of that reporting requirement for the years 2016 to 2018. Going forward, the plan is for SEMP recommendations to be incorporated into Minto policies and practices, as appropriate.

1.1.2 Project Setting

The Minto Mine is an open pit and underground copper mine. Construction began in 2006 and the mine entered into commercial production in 2007. The mine entered temporary closure in October 2018 resulting in a reduction in staff to a crew of seven people. The mine was sold in June 2019 and the mine exited temporary closure in October 2019. The impact of the sale and subsequent re-opening of the mine on socio-economic indicators is primarily associated with 2019 and will be discussed further in the Minto Mine SEMP Annual Report 2019.

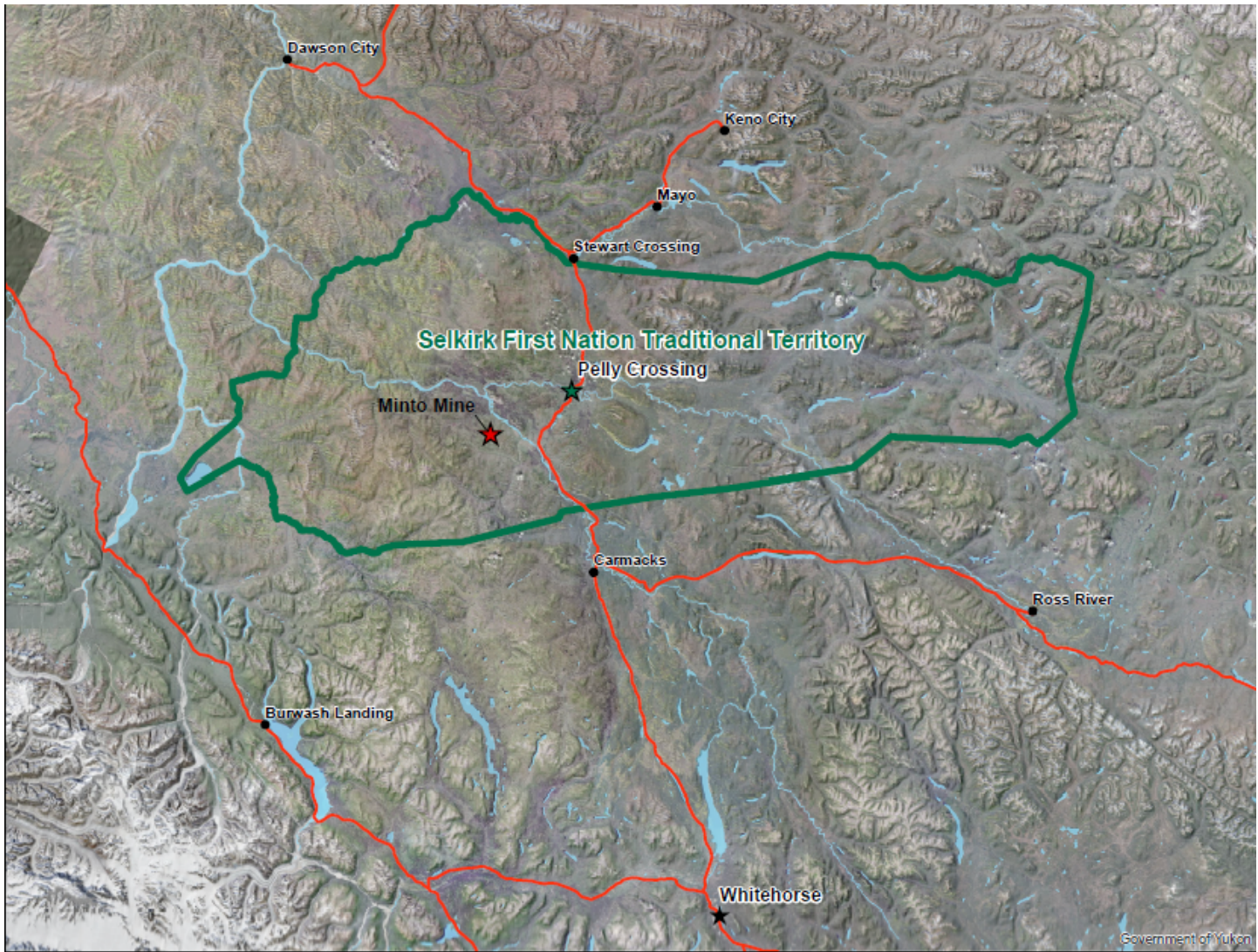


Figure 1-1. Location of Minto Mine

In 1997, SFN signed the Selkirk First Nation Self-Government Agreement with the governments of Canada and Yukon. SFN has ownership and control of 4,740 km² of land. The map above shows the Traditional Territory of SFN. The mine lies within "Category A" Settlement Land (SFN R-6A), on the west side of the Yukon River (see Figure 1-1).

SFN land ownership includes: "Category A" Settlement Land, where SFN has ownership of both the surface and the subsurface (including minerals and oil and gas), and exclusive fish and wildlife harvesting rights; and "Category B" Settlement Land, where SFN has ownership of the surface, and a small amount of land in the form of site-specific parcels.

The legislative powers of the SFN government include making laws with respect to the administration of the First Nation and the provision of programs regarding spiritual and cultural beliefs, language, health care and services, social and welfare services, training programs, adoptions, First Nation children, education, wills and intestacy, citizenship and all subordinate matters.

SFN is governed by a Chief and Council who serve three-year terms. The Chief, two Wolf Councillors, two Crow Councillors, one Elder Councillor and one Youth Councillor are elected by SFN citizens. The responsibility and authority of Chief and Council is defined in a constitution, and Chief and Council report annually to the SFN General Assembly, where decisions and discussions guide the First Nation.

In 2018, the total number of SFN citizens⁴, both residing within and outside Yukon, was 698 (Source: SFN). According to the Yukon Bureau of Statistics (YBS), Pelly Crossing had a population of 390 in 2018 and it is the community where the majority of Yukon-based SFN citizens reside (the total number of SFN citizens residing in Pelly Crossing in 2018 was 290, just over 74% of the population of Pelly Crossing). Many citizens participate in traditional activities (e.g. trapping, hunting, fishing and gathering) and contemporary economic pursuits. Efforts continue to maintain the traditional culture.

Pelly Crossing has a past that is rich in Northern Tutchone history, heritage and culture. The natural environment around Pelly Crossing supports many recreational activities.

SFN is the major land-owner within Pelly Crossing, which is an unincorporated community with no formal local government structure. YG and SFN share responsibility for service delivery.

Table 1-1: Living Conditions and Valued Conditions

<u>Living Conditions</u>	<u>Valued Conditions</u>
Community Stability and Well-being	Community Stability and Well-being
	Family Stability and Well-being
	Health
	Housing
Material Well-being	Income and Income Distribution
	Employment
	Business
	SFN Traditional Economy
Capacity, Training and Education	Employment and Workforce Development
	Education and Training
Cultural Well-being	Connection to Land and Water
	Cultural Vitality
	Social Cohesion
Sustainability and Legacy	Fate Control and Preparedness
	Boom/Bust Management
	Costs and Benefits for Future Generations

1.2 Living Conditions, Valued Conditions & Indicators

The Living Conditions, Valued Conditions⁵ and Indicators used in this report form the basis for assessing the socio-economic effects of the Minto Mine. The framework is described in detail in the Minto SEMP: Components, Information and Program Requirements (as amended in 2018). The Indicators have been developed from a wide variety of programs and studies that monitor socio-economic living conditions in communities around the circumpolar North, and modified and validated by SFN, YG and Minto.

The Living Conditions, Valued Conditions and Indicators are included in Appendix 1. As a result of changes to the reporting structure over time, the numbered sequence of the indicators used in this report and Appendix 1 have some gaps.

In this report, a total of 33 of 65 Indicators measure changes in the Valued Conditions. Where appropriate, some indicators are applied to and measure more than a single Valued Condition. Table A-1 in Appendix 1 has been updated for this report to reflect the changes to the Indicators reported upon in the Report.



Chief Nelson and Council in 2017. Credit: Selkirk First Nation

1.3 Data Sources: Strengths & Limitations

The major data sources for the Minto Mine Socio-Economic Monitoring Program:

- statistical data collected and published by Statistics Canada (www.statcan.gc.ca/start-debut-eng.html), YBS (www.eco.gov.yk.ca/stats), and Yukon Socio-Economic Web Portal (<http://sewp.gov.yk.ca/home>);
- Minto Mine corporate data and reports;
- administrative data provided by the government and some administrative data from SFN.

Minto's internal data may be limited by certain factors, as the monitoring framework and its indicators were not developed and adopted until well into the mine's operation. The change in ownership in 2019 resulted in the loss of some historical data. As a result, historical data may not be available for some data indicators.

SFN administrative data, especially regarding retrieval in years prior to 2015, are compromised by data management system challenges.



Credit: Selkirk First Nation

A group of approximately ten people are seated in a room with wood-paneled walls. They are looking towards the left side of the frame, suggesting they are attending a presentation or meeting. The room has a window with two panes in the background, and a table with water bottles is visible on the left. The overall atmosphere is professional and focused.

2. Predicted Socio-Economic Effects

The monitoring program is intended to assess the socio-economic effects of the Minto Mine by comparing Valued Conditions pre-project and during the project as well as predicted and actual socio-economic effects. The socioeconomic effects predicted for the Phase V/VI mine expansion are consistent with predictions associated with earlier mine phases. Table 2-1 summarizes the predictions (grouped by Valued Condition) from the Minto Phase V/VI Socio-economic Study Report that Minto submitted to YESAB in 2013.

Credit: Minto Explorations Ltd.

Table 2-1: Predicted Socio-economic effects (per Phase V/VI YESAA

Socio-economic study)

#	VALUED CONDITION	PREDICTION
1	Community stability and well-being	<p>p.63: Minto is working with SFN through the Tripartite Socio-economic Working Group to further define wellness, so that this VSEC [valued socio-economic component] can be monitored and assessed in the future. Furthermore, Minto and SFN are working to determine how Minto may contribute to SFN community wellness.</p> <p>p.91: The effects of the Project on population in the RSA [regional study area] and LSA [local study area] are expected to be minimal.</p>
		<p>p.99: Project operations will have positive effects on the well-being of communities in the LSA, as assessed according to the CWB [community well-being] Index evaluation by increasing employment opportunities, providing sources of income to residents, and supporting education initiatives... However, as with health, community well-being will be monitored as part of the Project effects monitoring program being led by the tripartite Socio-economic Working Group given the number of factors that come together to define community well-being and the fact that the factors affecting community well-being can change over time.</p>
3	Health	<p>p.94: Project operations are not expected to have a measurable effect on the health conditions of either RSA or LSA residents, based on Minto's current experience, since operations began.</p>
4	Housing	<p>p.93: Project operations are not expected to have a notable effect on housing in the LSA or RSA given the small incremental number of employees and the fact that Minto will expand the capacity of the mine camp to accommodate all employees on-site during their shifts.</p>
5	Income	<p>p.86: ...the Project will result in the generation of approximately \$150 million of Minto direct site employment income along with an undetermined amount of contractor employment income. Assuming that the Phase IV distribution of workers is maintained in Phase V/VI, approximately 35% of the direct income could accrue to the RSA and LSA; however, the actual percentage will depend on the nature of the employment secured by RSA and LSA residents and the associated salary.</p>
6	Employment	<p>p.34: Minto is currently working with the SFN to develop initiatives to increase SFN employment at the mine including the creation of a SFN-Minto Mine Employment Liaison position.</p> <p>p.37: Minto is committed to increasing SFN employment at the mine and with its contractors.</p> <p>p.82: During project operations, employment opportunities are expected to range between 125 positions in year 2022 and 450 positions in year 2016 and 2017. Compared to the peak Phase IV employment levels (400 positions), this amounts to a maximum increase at peak project operations of approximately 50 positions.</p> <p>p.83: Based on the current breakdown of staff location (i.e. 35% Yukon based), 18 of the additional 50 positions would be filled by Yukon based (i.e. RSA and/or LSA residents) Minto or contractor employees at peak operations.</p>

#	VALUED CONDITION	PREDICTION
6	Employment (cont'd)	p.84: Approximately four to five SFN citizens will be employed to assist with reclamation projects annually.
		p.84: Minto will continue to offer a summer student program which employs five SFN students for the summer months.
		p.84: Minto anticipates bringing in three apprentice positions in the near future in the maintenance department with the expectation that the program could grow as the mine develops.
		p.85: Employment opportunities will continue throughout decommissioning and closure. The number of employment opportunities is expected to range between 25 positions and 63 positions, including part-time and seasonal positions... It is anticipated that a greater proportion of workers will come from the LSA and RSA during the decommissioning and closure phases.
7	Business	p.79: SFN will also benefit from ongoing payments during mine operations and the LSA and RSA will benefit from ad hoc donations from Minto throughout the mine life.
		p.80: Minto currently works with approximately 475 suppliers and has a number of initiatives in place to enhance the participation of RSA and LSA based businesses at the mine. In 2012, approximately \$81 million of Minto's \$277.3 million in total expenditures were in Yukon. The demand for goods and services is anticipated to continue at a similar level to that experienced during Phase IV until 2018, when demands will change with respect to changing activities at the mine. Although overall opportunities will decrease as the Project progresses through operations, Minto anticipates that a similar or larger portion of its expenditures will continue to be spent on Yukon based goods and services.
		p.80: The project will provide an opportunity for the Selkirk Development Corporation joint ventures serving the mine as well as other existing and new LSA businesses to increase their involvement in the Project given that approximately 70% of goods and services are currently sourced from outside Yukon.
		p.81: It is anticipated that new opportunities related to reclamation, monitoring and site maintenance will arise for LSA and RSA businesses during decommissioning and closure. This will provide the opportunity for businesses currently not involved in the Project to become involved and, for certain businesses to be provided the opportunity for long-term involvement through closure.
		p.88: Minto has paid \$12.6 million in royalties to the SFN since 2008 (Government of Yukon, 2012), and payments are expected to continue at similar levels provided that there are no major changes in the market for products from the mine.
8	Traditional Economy	p.89: Effects [on traditional use activities] currently being experienced as a result of Phase IV will be extended as a result of the Project but increased effects over those currently experienced are not anticipated.

#	VALUED CONDITION	PREDICTION
9	Employment and Workforce Development	p.56: Minto is working with the SFN Education Department, local educational institutions, and the YG to develop and support opportunities for SFN citizens.
		p.57: The Eliza Van Bibber School and Minto are working together to expand opportunities such as class trips to the mine site and credited work experience programs for senior students that provide students opportunities to observe and learn about the variety of careers available at the mine.
		p.58: Minto is currently working in partnership with the Yukon College and the Yukon Mine Training Association (YMTA) to develop apprenticeship and internship opportunities. p.59: Minto is committed to providing training opportunities that facilitate the development of skills and careers with Minto and/or its contractors. Minto contractors are committed to hiring, training, and advancing the careers of local residents, wherever possible.
10	Education and Training	p.85: Employment opportunities will continue throughout decommissioning and closure. The number of employment opportunities is expected to range between 25 positions and 63 positions, including part-time and seasonal positions... It is anticipated that a greater proportion of workers will come from the LSA and RSA during the decommissioning and closure phases
		p.61: With a view to furthering opportunities for LSA and RSA residents and other employees, Minto and its contractors are developing training opportunities in partnership with the Yukon College, the YMTA, Mile 918 Driver's School, and the Northern Safety Network for delivery of industry training.
		p.84: Minto will be putting on a training program in conjunction with SFN and the underground contractor at the mine. This will be provided to ten community members who will be qualified to work at the mine once they successfully complete the program. p.97: Education and training will be positively affected during project operations. The Project will result in the enhancement of the skill and education levels of LSA and RSA residents directly through on-the-job training and community based programs, and indirectly through training provided by Minto contractors. Furthermore, the Project will facilitate the continuation of the Minto-SFN scholarship program for advanced education, which was established for SFN citizens as part of the Minto-SFN Cooperation Agreement.
12	Cultural Vitality	p.100: Project operations will have indirect positive and negative influences on SFN cultural well-being through effects on such VSECs as business, employment, income, royalties, and donations.

3. Summary of Observed Trends and Conditions



Selkirk Centre

Credit: Selkirk First Nation

3.1 Observed Trends

Table 3-1 summarizes the observed direction of some of the trends and associated changes in valued conditions that are detailed in Section 4. The table highlights key indicators for health & population, material well-being, capacity and education and training. The table utilizes a model developed by the Government of Northwest Territories for monitoring the socio-economic effects of diamond mines on communities.⁸





Green arrows up or down show trends or changes viewed as positive. Increasing average household income is a positive indicator and would be shown with a green up arrow. A decline in housing condition (need for major repair) would also be positive and be shown with a green down arrow.













Red arrows up or down show trends or changes viewed as negative. An increase in housing condition (need for major repair) is negative and would be shown a red down arrow. A decrease in household income is negative and would be shown with a red down. Where there is no observed trend, or the trend is neutral or negligible, a long dash (—) is shown. The abbreviation “np” indicates no prediction.

Trends or changes in the table 3 -1 were completed by analysing data from the Minto Mine SEMP Annual Report 2014 and 2015, Minto Mine SE Quartz Licence Reports 2016, 2017 and 2018, information from NHS, Government of Yukon Socio Economic Web Portal, Census data, Minto Mine corporate data and certain SFN data.


Since 2006, the SFN population in Pelly Crossing has increased. Both personal and household incomes rose in Pelly Crossing. Employment, participation and unemployment rates have all rebounded from 2011 to be similar to 2006 values. These values may validate the concerns raised in the 2015 Report regarding the accuracy of the 2011 data due to the change to NHS from the Census format. Public administration continues to be the dominant industry in Pelly Crossing; however, it has significantly decreased since 2011 to be more comparable to the 2001 values. The number of SFN members working for Minto has significantly increased from one person in 2008 to 23 people throughout the year in 2018. Direct spending in Pelly Crossing has increased from \$66k in 2013 to over \$1.8M in 2018.

Table 3-1: Summary of Observed Trends

INDICATOR #	INDICATOR	TREND IN PELLY CROSSING	TREND IN YUKON	PREDICTED TREND	COMMENT
Population & Health					
Indicator #1	SFN Citizens by Residency		—	np	Since 2006 the SFN population in Pelly Crossing has increased and was at its peak in 2014. This upward trend decreased minimally in 2016 but has held steady from 2016 until 2018. Since 2006 there has been an overall positive upwards trend of SFN Citizens by Residency making it a positive socio-economic indicator.
Indicator #2	Duration of Residency (5 years)		—	—	The percentage of population remaining over a 5-year duration of residency has seen a steady increase since 2006. The peak was in 2016 and the data for duration of residency remains similar from 2011 to 2016, indicating longer-term community stability.
Indicator #5	Crime severity		—	—	Overall, crime incidence have remained similar from 2015 until 2017 and there was a drop in the rate in 2018. Violent crime went down between 2015 to 2016 and was lowest in 2018. Overall, this information is an important positive indicator for the community's stability.
Indicator #6	Family structure (lone parent families)		—	np	The number of lone parent families has continued to rise since 2006 in Pelly Crossing while the proportion in Yukon has remained stable. The increase in Pelly Crossing is associated with lone parents with one child, not multiple children. An increasing proportion of lone-parent families may indicate declining cohesion and less internal support in family structures or changing societal norms.

INDICATOR #	INDICATOR	TREND IN PELLY CROSSING	TREND IN YUKON	PREDICTED TREND	COMMENT
Indicator #10	Minto and contractor safety			—	Total safety incidents have gone down substantially from 2014 to 2018. The decline may be partially attributed to the mine's activity levels. However, expenditures were on relative par in both 2015 and 2017 yet safety incidents in 2017 were a third of the level of incidents in 2015. This indicator demonstrates that safety practices are having an impact on safety statistics.
Indicator #15	Housing condition (need for major repair)			—	The highest proportion of houses in need of major repair was in 2011 and the level tapered off in 2016. Housing condition continues to be a challenge in Pelly Crossing. Rates of housing in need of major repairs in Yukon were 14% in both 2006 and 2011 whereas went down nominally in 2016 to 12%.
Material Well-being					
Indicator #16	Average employment income by residency, Minto				Average employment income for Minto employees in Pelly Crossing has been trending upwards over a 5-year period; the same can be said for the rest of Yukon.
Indicator #17	Average employment income by residency, contractors				The average employment income by residency for contractors increased between 2015 to 2016 in both Pelly Crossing and Yukon. This increase has remained relatively consistent until 2018. This increase matched the prediction from 2014.
Indicator #19	Average household income			np	Average household income rose in both Pelly Crossing and Yukon. Incomes continue to be lower in Pelly Crossing than the rest of Yukon.

INDICATOR #	INDICATOR	TREND IN PELLY CROSSING	TREND IN YUKON	PREDICTED TREND	COMMENT
Indicator #20	Average personal income	↑	↑	↑	Average personal income rose in both Pelly Crossing and Yukon; however, the rate in Pelly Crossing was twice the percentage rise for Yukon.
Indicator #22	Number of SFN citizens Receiving Social Assistance	—	N/A	—	No trend in number of cases.
Indicator #23	Minto employment by group	↑	↑	↑	The SFN and Yukon employment rates were higher between 2015 to 2018 whereas all the other groups within this category declined.
Indicator #24	Minto employment by residency	—	↑	↑	SFN employment residency rates remained relatively similar between 2015 to 2018. During that same time period, Whitehorse residency employment rose. The percentage of Yukoners employed has increased as was predicted.
Indicator #25	Employment by contractors	—	—	—	SFN employment by contractors have remained at comparable levels to 2015. Other Canadian rates have increased.
Indicator #26	New hires by group	—	↓	—	New hiring rates overall have declined in line with changes in ownership and operational activities (entering temporary closure and stopping surface mining). SFN new hiring rates peaked in 2017.
Indicator #28	Employment rate	↑	—	np	Employment rates went up in Pelly Crossing while remaining relatively the same rate in Yukon.
Indicator #29	Unemployment rate	↓	—	np	Unemployment rates went down in Pelly Crossing while remaining relatively the same in Yukon.

INDICATOR #	INDICATOR	TREND IN PELY CROSSING	TREND IN YUKON	PREDICTED TREND	COMMENT
Indicator #30	Participation rate	—	—	np	Participation rates went up nominally in Pelly Crossing while remaining on par in Yukon.
Indicator #33	Operations and capital spending	—	—		Between 2015 to 2018, both operating and capital expenditures have remained relatively stable with a peak of spending in 2017. Direct economic benefits resulting from Minto's operating and capital expenditures continue to be significant.
Indicator #36	Royalty payments		—	--	QMA royalty payments are on par with 2010 payments and have increased substantially since 2015. NSR royalty payments have increased in both 2017 and 2018.
Indicator #37	Property tax payments	—	—	np	Property tax payment amounts were higher in 2016 and remained constant in 2017 and 2018. Property tax payments can be seen as a positive indicator for infrastructure maintenance and development and other territorial and community requirements.
Capacity, Education & Training					
Indicator #48	School Absenteeism	—	—	np	There was no clear trend for either EVB or rural schools. The values at EVB fluctuated from a low of 1,452 days absent to a high of 2,812 days absent.

3.2 Observed Conditions

This section summarizes key findings for each Living Condition based on the Indicators that are reported on within this Report. In each case, the relevant Indicator(s) are followed by a paragraph describing the results associated with the list of Indicators. Only 33 of the 65 Indicators have been updated in this Report and have summaries below. For the remaining Indicators, please see the 2015 Annual Report for the most recent analysis of these Indicators.

Population & Health

Population and Health includes the valued conditions of community stability and well-being, family stability and well-being, health and housing.

Indicator # 1 - SFN Citizens by Residency

Since 2006, the SFN population in Pelly Crossing has increased and was at its peak in 2014. This upward trend decreased minimally in 2016; however, the population rates have held steady between 2016 until 2018. The increasing population of SFN citizens in Pelly Crossing should be considered a positive socio-economic indicator. Since the mine started construction, the population in Pelly Crossing has grown from 242 people to just under 300. Having economic opportunities associated with the mine may be impacting this growth.

Indicator # 2 - Duration of Residency

The percentage of population remaining over a five-year duration residency has seen a steady incline since 2006 with 2011 being the highest. In 2016, the data remains relatively similar between 2011 to 2016, indicating longer-term community stability.

Indicator # 3 - Net Migration

The population has remained relatively steady from 2015 to 2018. There is no data on out-migration or in-migration to Pelly Crossing; however, the population growth indicates that there are a greater number of people moving into the community than out of the community.

Indicator # 5 - Crime Severity

Overall total violations of crime incidents have remained similar between 2015 to 2017, with a drop in crime in 2018. Violent crimes went down between 2015 to 2016 and went to a low in 2018. This indicator demonstrates relative crime offences stability in Pelly Crossing. The perceptions associated with crime severity will be further analyzed with data from the next SFN Household Survey.

Indicator #6 - Family Structure (lone parent families)

The number of lone parent families has continued to rise since 2006 in Pelly Crossing while the proportion in Yukon has remained stable. The increase is associated with lone parents with one child as opposed to lone parents with multiple children. An increasing proportion of lone-parent families may indicate declining cohesion and less internal support in family structure, or it may depict the norms of our ever-changing society within North America.

Indicator # 10 and 38 - Minto and Contractor Safety

Total safety incidents have gone down substantially between 2014 and 2018; a portion of this downward trend can potentially be attributed to less activity at the mine. It should be noted that expenditures were on relative par in both 2015 and 2017, yet safety incidents in 2017 were a third of the level of safety incidents in 2015. Mine safety practices are having a positive impact on total safety, total no lost time and total lost time incidents. Although no predicted trend was part of the Phase V/VI Socio-economic Study, the current trend is positive. Having a positive trend in Minto and Contractor Safety is important as safety is an area where Minto is trying to continuously improve. Having a positive trend in Minto and Contractor Safety demonstrates the importance and the value of this Indicator to the Living Condition.

Indicator#15 Housing Conditions (need for major repair)

The trend for housing conditions (those in need for major repair) has risen since 2006. The highest amount was in 2011. It tapered off in 2016 but was still higher than in 2006. The SFN Household Survey also provides information on concerns of Pelly Crossing SFN citizens with housing. There continues to be a substantive concern regarding the housing conditions in Pelly Crossing.

Material Well-being

Material Well-Being includes the valued conditions of income and distribution, employment, business and SFN traditional economy.

Indicator #16 - Average Minto employment income by residency

Average employment for Minto employees from Pelly Crossing has been trending upwards over a five-year period as was predicted in the YESAA process. This is positive for material well-being of both the employees and their families but also their community.

Indicator #17 - Average employment income by Minto contractors by residency and/or group

Indicator #18 - Minto and contractors' cumulative total annual employee income by residency or group

In both Pelly Crossing and Yukon, the average employment income was predicted, during the YESAA process, to increase and that increase has been seen in the data from 2014 to 2018. The averages of wages were well above minimum wages during these years demonstrating that the mine is providing a source of good quality jobs. There continues to be a substantial difference in the rates of pay between Pelly Crossing residents or SFN members and non-FN Yukoners and/or other Canadians.

Indicator #19 - Average and distribution of household income

Indicator #20 - Average and Distribution of Personal Income of SFN Citizens in Yukon

Indicator #21 - Income by Source

Indicator #22 - Number of Social Assistance Cases

Indicator #28 - Employment rate

Indicator #29- Unemployment rate

Indicator #30 - Participation rate

Both personal and household incomes rose in both Pelly Crossing and Yukon as predicted. There continues to be a substantial difference in both personal and household incomes between Pelly Crossing and Yukon and the gap has increased since 2006, particularly for household incomes. This may reflect the fact that the portion of SFN citizens with employment income as the primary source of income has dropped from 87% in 2006 to 76% in 2016. This is also reflected in the higher labour force employment rate in 2006 than 2016. Unemployment at Pelly Crossing continues to be high at 25% compared to 7% in Yukon in 2016. The number of citizens receiving social assistance has no clear pattern, varying from 169 to 188.

- Indicator # 23 - Minto employment by group
- Indicator #24 - Minto employment by residency
- Indicator #25 - Employment by contractors
- Indicator #26 - Minto new hires for operations by group
- Indicator #27 - Minto employment by job category and group

Since 2016, approximately 50% of Minto employees live in Yukon while Pelly Crossing residents averaged approximately 6% of Minto's employees. On average for 2016 to 2018, approximately 11% of the employees are SFN citizens and 13% are from other First Nations. As was predicted, the portion of employees from the Yukon has increased since 2014. Non-FNs Yukon employee numbers have grown more quickly than FN employees. Almost all the employment related to underground mining is specialized work completed by individuals from outside of Yukon. Most employees hired by the surface mining contractor and the camp contractor are Yukon residents. There continues to be room to grow the number of FN employees and Yukoners, particularly associated with underground mining which is the future of Minto Mine.

Indicator #32 - Employment by sector

Public administration is the single largest industry for Yukon as a whole. It is especially dominant in Pelly Crossing; however, the share has significantly decreased in 2016. This may be due in part to the evolution of SFN's self-governance and the rise of other sectors such as health care and education. The percentage of people in Pelly Crossing involved in mining has remained the same as it was in 2006 and substantially higher than the rate in Yukon as a whole.

- Indicator #33 Minto operations and capital expenditures
- Indicator #34 Minto annual and cumulative capital and operations expenditures
- Indicator #35 Minto spending on Yukon vendors

Since 2015, total expenditures have varied between \$94 million in 2018 and \$126 million in 2017. Combined cumulative capital and operating expenses between 2006 and 2018 was over \$1.4 billion. Of the expenditures since 2015, the percentage of spend in Yukon ranged from 37-48% with between 5-9% of Yukon's total spend in Pelly Crossing. Since 2013, Minto has spent over \$11 million in Pelly Crossing and over \$236 million in Yukon. These values are a substantial impact to the economy in both Pelly Crossing and Yukon, especially as indirect impacts are not calculated and spend by individual employees and contractors is not included.

Indicator #36 Minto Royalty Payments

Indicator #37 Minto Property Tax Payments and Other Fees

SFN receives revenue through mineral royalties and a net smelter return (NSR) payment that are paid by Minto. While these payments are variable depending on production levels and market commodity prices, they have generated significant revenue since the start-up of the mine. The total QMA royalty paid from 2015 to 2018 was \$10,474,915. From 2015 to 2018, the total of net smelter return payments to SFN was \$5,821,467. Between 2015 and 2018, a total of \$1.6 million in property taxes has been paid to the Government of Yukon. The royalty and property tax payments were stable from 2016 to 2018 while the NSR payments were stable in 2017 and 2018 despite the mine entering temporary closure in October 2018.

Capacity, Training and Education

Capacity, Training and Education includes the valued conditions of employment and workforce development, and education and training.

Indicator #42 High-level Description of Initiatives to Enhance Skills & Labour Force Development

Indicator #43 Detailed Description of Initiatives to Enhance Skills & Labour Force Development

Indicator #44 Description of Partnership Arrangements to Enhance Skills & Labour Force Development

Minto has undertaken a number of initiatives to provide training and workforce development opportunities to FN citizens including SFN and OFN specific training have been put into place including the following: Mill Competency Program, Pre-Apprenticeship training, Apprenticeship training, Environmental Monitor-in Training, SFN Summer Student Program during 2016 to 2018.

Indicator #48 School absenteeism

School absenteeism rates are an indicator of the value placed on formal education by individuals and the community. This indicator previously used rate data (days absent per student). In this report, the data presented is total days absent. There was no clear trend for either Pelly Crossing (Eliza Van Bibber School (EVB)) or rural schools. The days absent at EVB fluctuated from a low of 1,452 to a high of 2,812 days absent. The Department of Education has evolved its approach to school absenteeism. As a result, in consultation with subject matter experts and data custodians, this indicator will be reviewed prior to the 2019 Annual Report.

4. All Observed Socio-Economic Conditions and Effects



Credit: Minto Explorations Ltd.

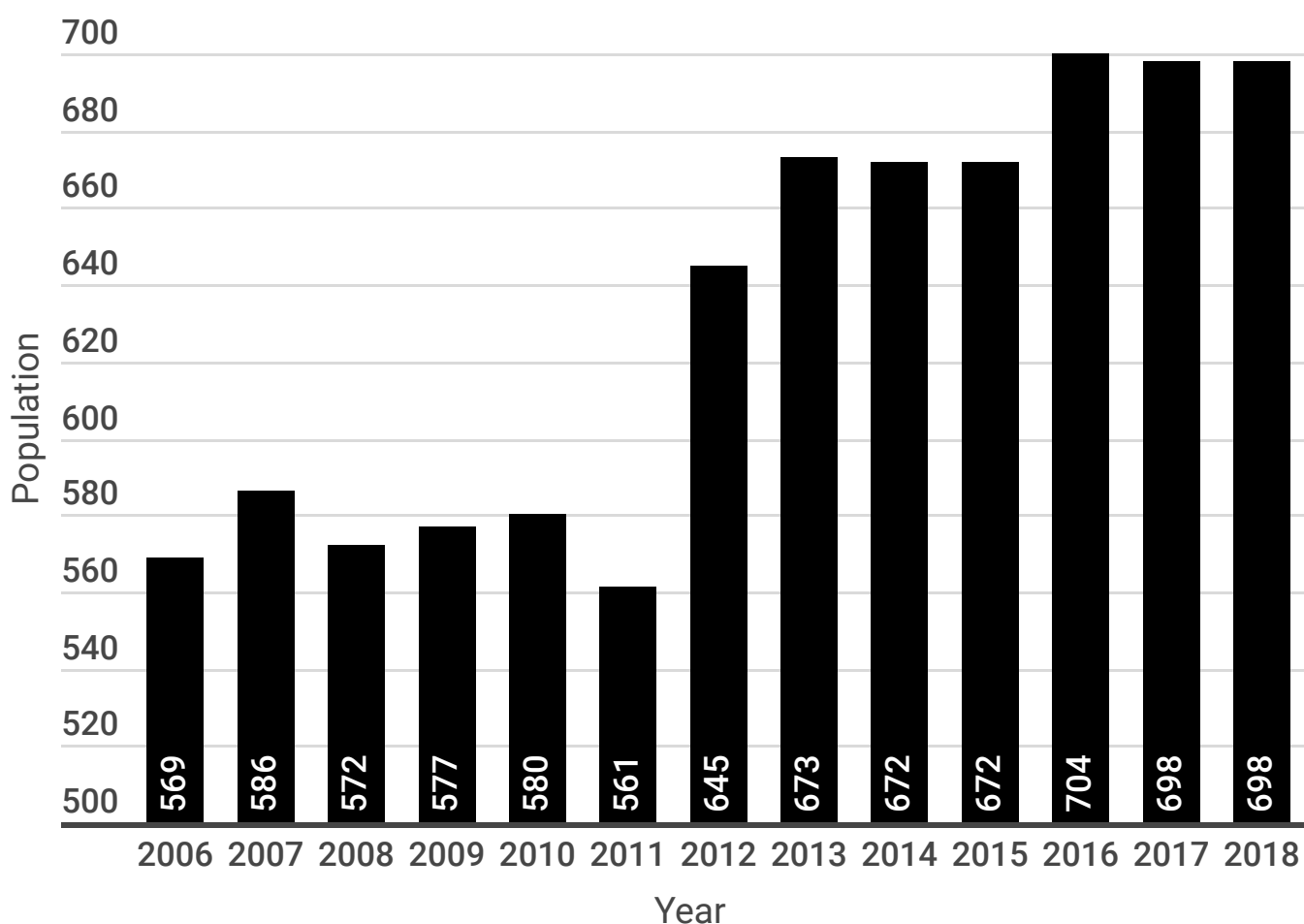
4.1 Community Stability & Well-being

This section presents the available data for Indicator #1 (SFN Citizens by residency); Indicator #2 (Duration of residency); Indicator #3 (Net migration); and Indicator #5 (Crime severity). Note: that indicators with no new information have not been included in this report. For those indicators, please see the 2015 Annual Report.

4.1.1 Indicator #1

Selkirk First Nation Citizens by Residency denotes the total population of SFN citizens. Updated information is taken directly from SFN data. The SFN population includes SFN citizens in Pelly Crossing, Whitehorse, other Yukon and outside of Yukon in Canada.

Figure 4-1: Total Population of SFN Citizens: 2006-2018

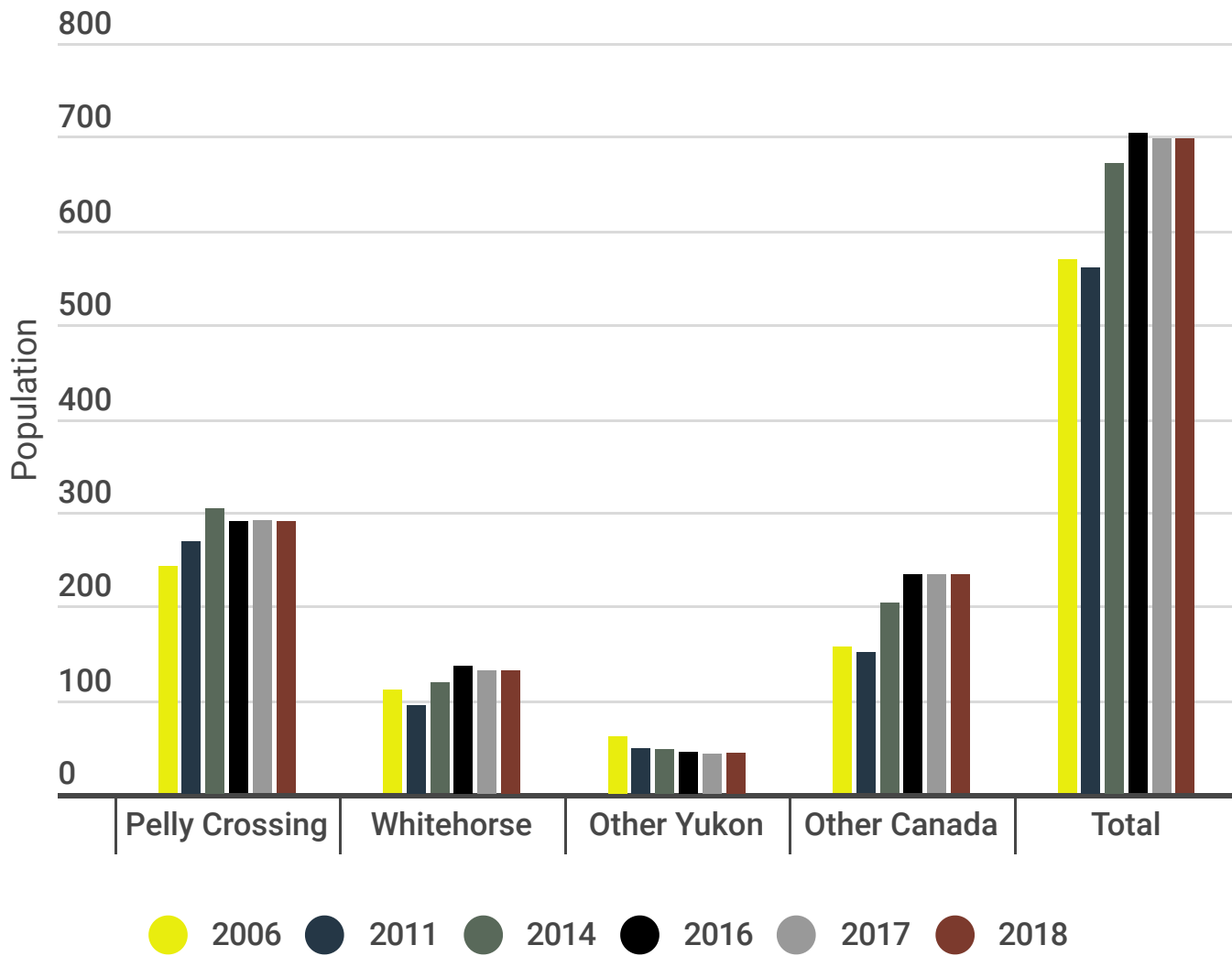


Source: Selkirk First Nation Administration

Notes on Figure 4-1:

- Between 2016 to 2018 the population has remained constant. The population rate increased 4% between 2015 to 2016; from 2016 to 2017 the population rate decreased by 1% and remained constant for 2018.
- This overall population rate has increased steadily since 2006 and has held relatively constant, in terms of population rates between 2016 to 2018.

Figure 4-2: Population of SFN Citizens by Place of Residence: 2006, 2011 and 2014, 2016-2018



Source: Selkirk First Nation Administration

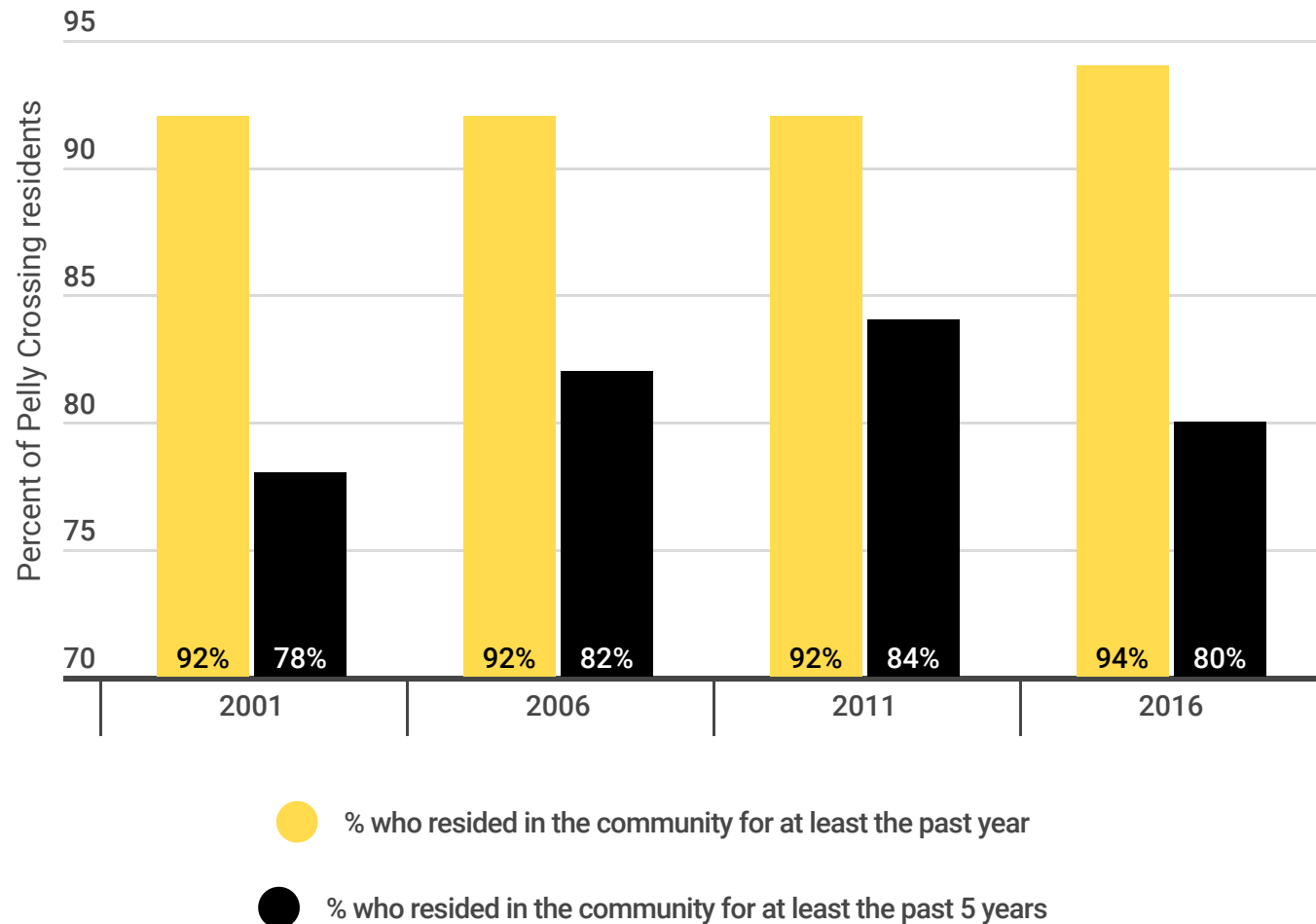
Notes on Figure 4-2:

- The number of SFN citizens living in Pelly Crossing has remained constant from 2016 to 2018.
- There was a slight decrease of 4% in SFN population in Whitehorse between 2016 to 2017 and remained constant thereafter between 2017 to 2018.
- There is a slight increase of almost 10% for SFN residents in other parts of Canada from 2014 to 2016 and this number remained constant until 2018.

Indicator #2 Duration of Residency

The duration or length of residency is an indicator of the strength of individual and family ties to the community. It can also be an indicator of economic satisfaction. Figure 4-3 shows the percentage of Pelly Crossing residents who had reported living in the community for at least one year and for at least five years at the time of the Census in 2001, 2006, and 2016 and the NHS in 2011.

Figure 4-3. Percent of Pelly Crossing residents who resided in the community for at least one year and at least five years before the Census/NHS: 2001, 2006, 2011 and 2016.



Source: Census 2001, Cumulative Profile; Statistics Canada; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Cyan_PR_CD_CSD_DA; 2016 Census Catalogue no. 98-316-X2016001, YESAB

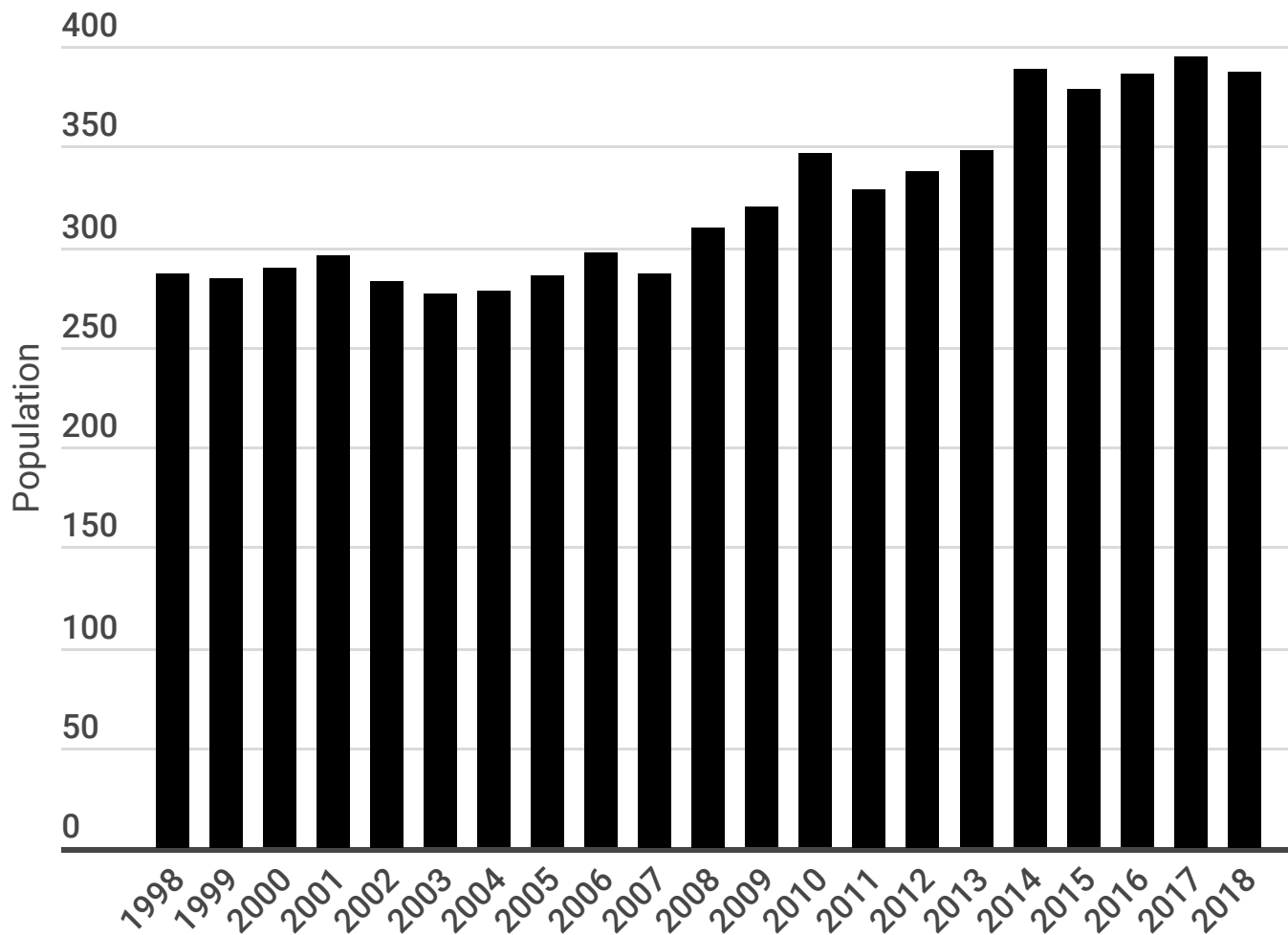
Notes on Figure 4-3:

- The percentages shown include those who reported living at the same address one year or five years prior (non-movers) and those who reported having changed addresses but still lived in the community (non-migrant movers).
- The one-year stability rate in Pelly Crossing has remained consistent since 2001, with an average of 93% from 2011 to 2016 of residents not having moved into or out of the community in the year prior to the Census.
- There is a stability trend in the five-year stability rate, and an average of 82% from 2011 and 2016 of residents reported living in the community for at least five years. This rate has remained relatively similar since 2001.

4.1.3 Indicator #3 Net Migration

The rate of net migration to Pelly Crossing potentially affects institutional and family stability within the community. Population growth is impacted by births, deaths, out-migration (people leaving the community) and in-migration (people moving to the community). For Pelly Crossing, there is no accurate data on people leaving or joining the community. Between 2001 and 2016, there were 58 more births than deaths. However, the population has grown (see the chart below) by more than 58 people. This means that there has been some net movement of people into the community.

Figure 4-4. Population of Pelly Crossing 1998 -2018



Source: Yukon Bureau of Statistics Annual Reports, Health Care population statistics

Notes on Figure 4-4:

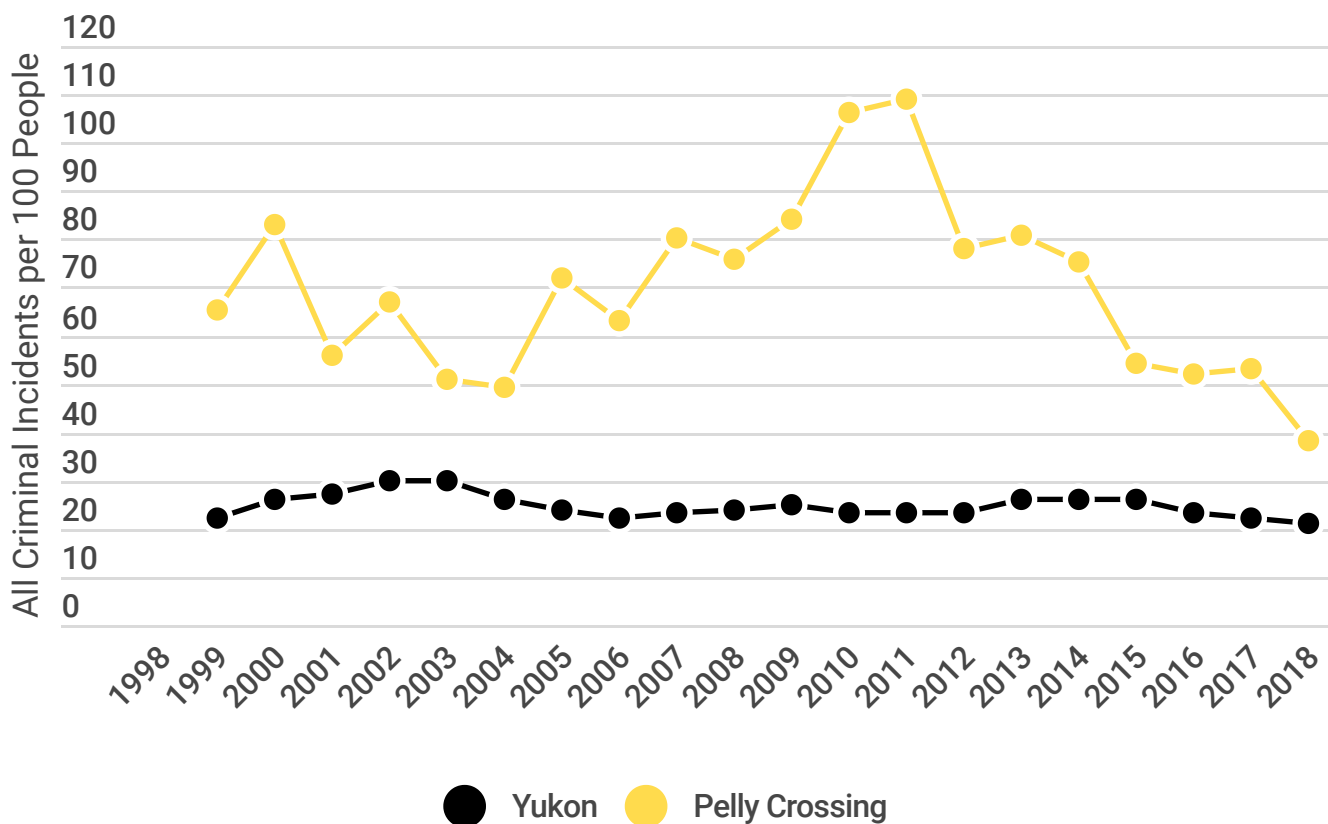
- Population rates as per YBS were similar in 2016 and 2018 with a ~2.5% increase in 2017. Population rates have remained relatively steady over a 5-year duration between 2014 to 2018 with the peak in the population in 2017.

4.1.5 Indicator #5 - Crime Severity

The rates of both violent and non-violent crime are indicators of a community's overall well-being. A high crime rate – or even the perception that there is a lot of crime – reduces feelings of safety and well-being. Figure 4-6 shows the rate of all reported criminal incidents for Pelly Crossing and Yukon per 100 people. Figure 4-7 shows the rate of all reported violent criminal incidents for Pelly Crossing and Yukon per 100 people over the same period.

The data shown includes Criminal Code traffic violations, federal statute violations, property crime, violent crime and other Criminal Code violations. As a result of low population numbers in smaller communities like Pelly Crossing, comparative graphs as shown in figure 4.6, do not depict a valid comparison due to difference in sizes of population between lesser populated communities and more densely populated cities.

Figure 4-6. Rate of all Criminal Incidents per 100 People, Pelly Crossing and Yukon: 1998-2018



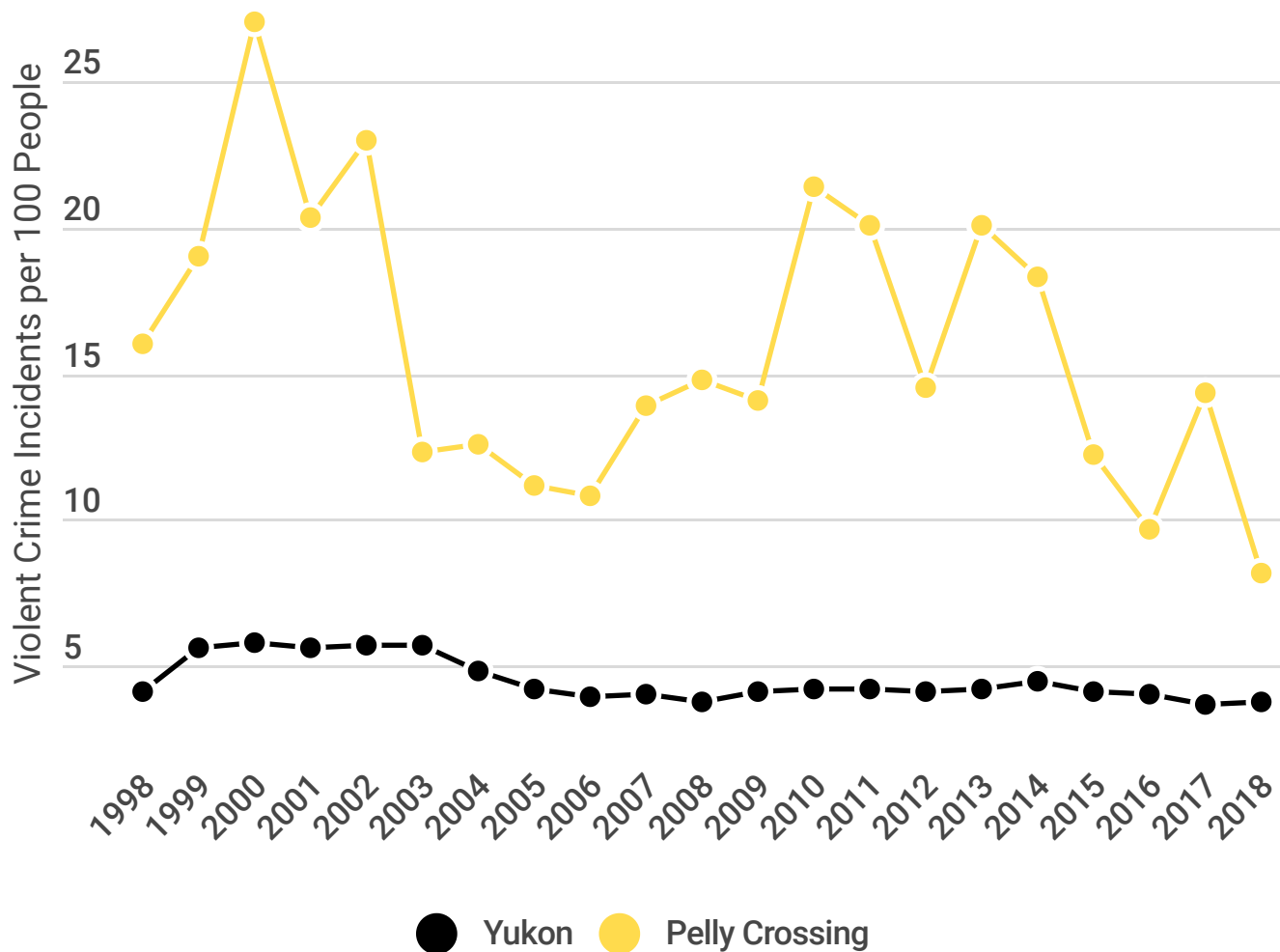
Source: Statistics Canada CANSIM Table 252-0082 & Table: 35-10-0185-01; Government of Yukon Socio-Economic Web Portal.

Notes on Figure 4-6:

- In Pelly Crossing, all violations went down by ~ 30% from 2016 to 2018. Other criminal code violations went down by over 50% in that same time period. In 2017, almost all the incidents of actual crimes were the same except for property crime which hit its peak in 2016, when looking at 2016-2018 time period.

According to Statistics Canada, a violent offence generally indicates a violation of the law that has included the use of aggressive action (with the intent to do harm) or threat of such action by one person against another.

Figure 4-7. Rate of Violent Crime Incidents per 100 People, Pelly Crossing and Yukon: 1998-2018



Source: Statistics Canada CANSIM Table 252-0082 & Table 35-10 - 0185 -01; Government of Yukon Socio-Economic Web Portal.

Notes on Figure 4-7:

- The overall trend in Pelly Crossing for the rate of violent crime incidents has remained relatively constant from 2015 with a large decrease since 2014.
- The rate in Yukon has been similar with no real noted changes since 2004.
- For Pelly Crossing, for the period of 2016 to 2018, violent crimes were the highest rate in 2017 whereas 2016 and 2018 were similar. The trend from 2015 to 2018 is that violent crime is decreasing.

4.2 Family Stability & Well-being

This section presents the available data for Indicator #6 (Family structure).

Indicator #6 - Family Structure

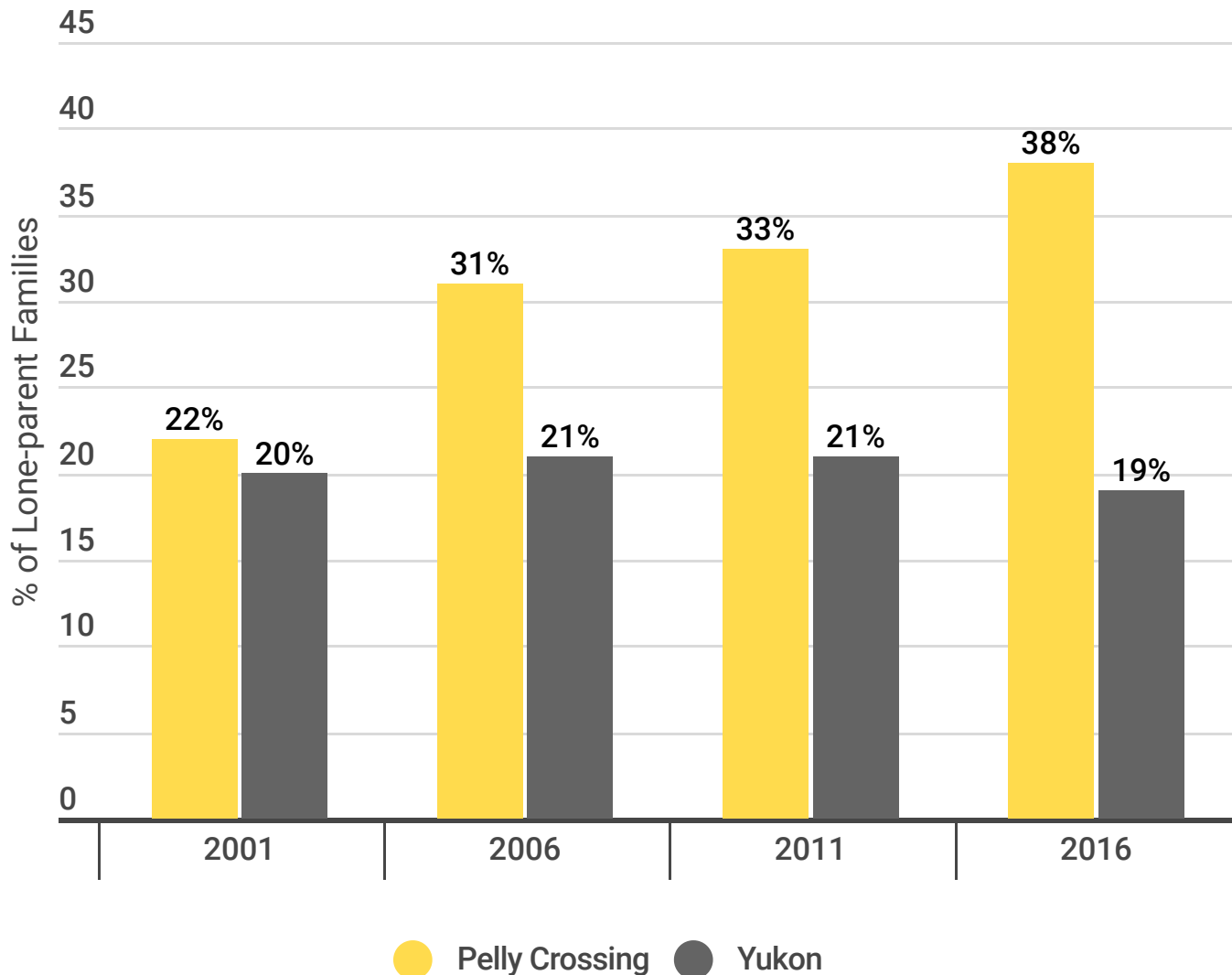
Family membership and frequency of time spent together reflects relative cohesion, and, therefore, stability and well-being. Cohesive families can come in many forms. An increasing proportion of lone-parent families may indicate declining cohesion and less internal support in family structure or it may depict the norms of our ever-changing society within North America.

Figure 4-8 shows the proportion of lone-parent families (defined by Statistics Canada as a lone parent with at least one child living at home) to all families (couples with or without children living at home) for Pelly Crossing and Yukon in the census years of 2001, 2006, and 2016 and the NHS year of 2011.



Vista at Minto Mine. Credit: Yukon government

Figure 4-8: Proportion of Lone-parent Families, Pelly Crossing and Yukon: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Government of Yukon Socio Economic Web Portal Census 2016

Notes on Figure 4-8:

- The proportion of lone-parent families increased from 22% to 38% for Pelly Crossing between 2001 and 2016, while for the Yukon population as a whole was essentially unchanged. Between the 2011 census and the 2016 census, the percentage of lone parent families in Pelly Crossing rose by 5% whereas the percentage of lone parent families in Yukon decreased by 2%.

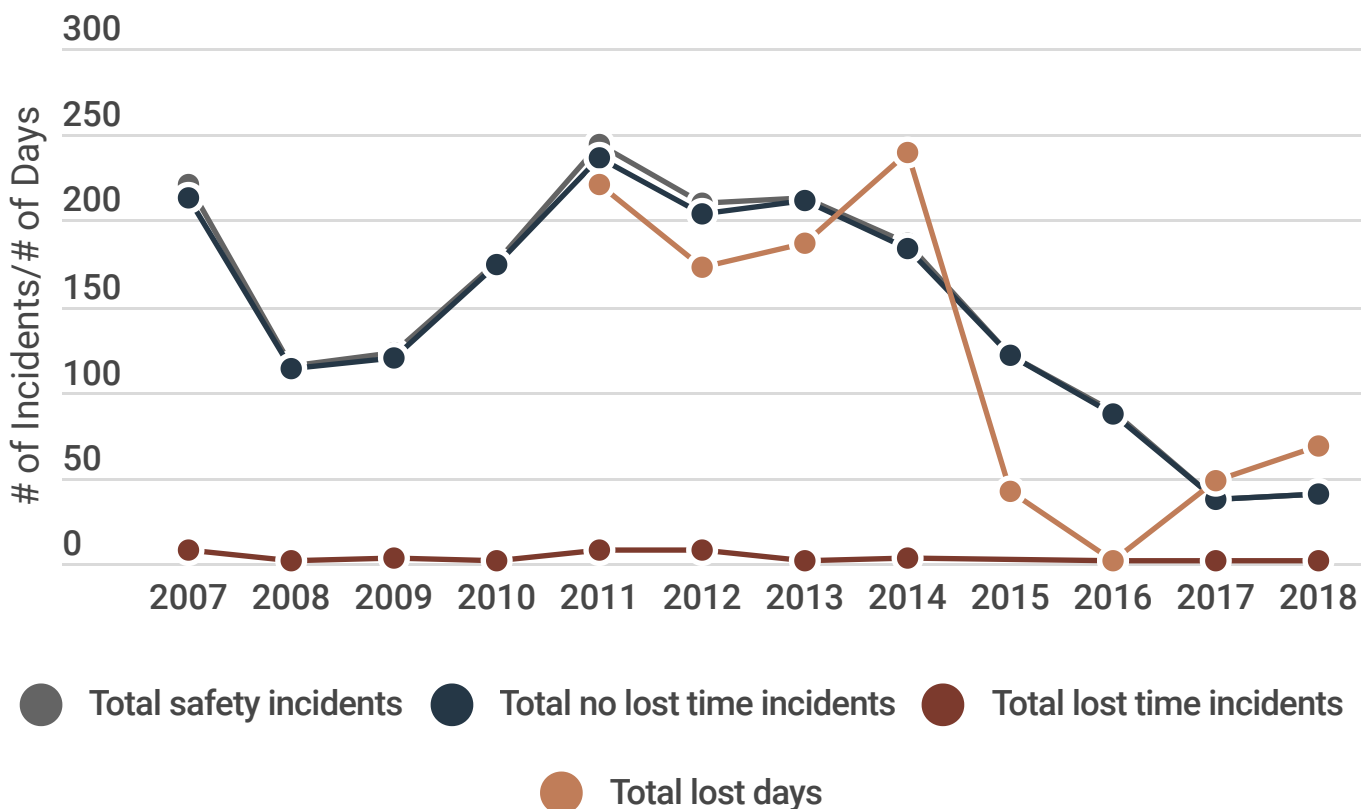
4.3 Health

This section presents the available data for Indicator #10 (Minto and contractor safety).

Indicator #10 Minto and contractor safety

Work-related injuries have high costs — in both health and financial terms — for workers and their families, for the employer and for society as a whole. Figure 4-15 shows the total number of Minto Mine safety incidents and the number of lost-time incidents from 2007 to 2018. The numbers of days lost to injury are available for 2011–2018 only.

Figure 4-15. Total Minto Mine safety incidents and lost days due to injury, company and contractors, 2007–2018



Source: Minto Explorations Ltd.

Notes on Figure 4-15:

- Total safety incidents include all forms of incidents, including those that require medical aid (on- or off-site) and those that do not. Near-miss incidents — a potential hazard or incident that did not result in injury — are also included in the total. Note that the vast majority of safety incidents do not result in any lost time.
- Total safety incidents have decreased by 50% between 2016 and 2018; total no lost time incidents have decreased by 50% between 2016 and 2018. Total lost days were highest in 2014 and have been lower since 2014. Note that there was new safety leadership in 2016.

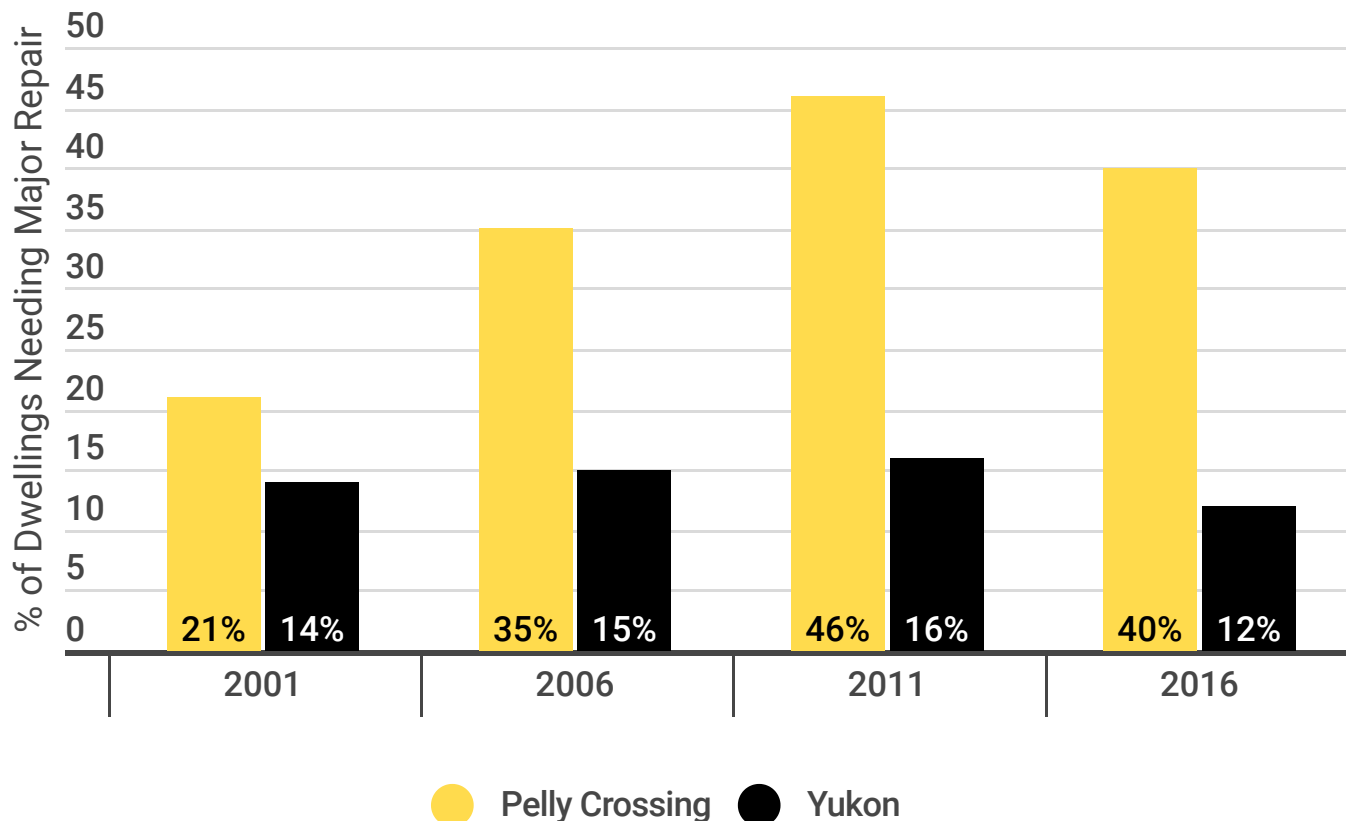
4.4 Housing

Housing is one of the sixteen selected Valued Conditions of the monitoring program. This section presents the available data for Indicators #15 (Housing condition).

Indicator #15 Housing condition

This indicator reflects the quality of community housing stock and its state of repair. Figure 4-21 shows the percentage of dwellings requiring major repair as reported by occupants in Pelly Crossing and other parts of Yukon, as part of the 2001, 2006 and 2016 Census and the 2011 National Household Survey. It should be noted that the 2015 SFN Household Survey also provides information on concerns of Pelly Crossing SFN citizens with housing.

Figure 4-21: Percentage of dwellings needing major repair as reported by occupants, Pelly Crossing and Yukon: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Government of Yukon Socio-Economic Web Portal Census 2016.

Notes on Figure 4-21:

- The percentage of dwellings needing major repairs in Pelly Crossing went down between 2011 to 2016 as it did in Yukon. A decrease can be seen as positive indicator and will be further verified in the SFN Household Survey 2020. However, 40% indicates that there is an ongoing concern.

4.5 Income and Income Distribution

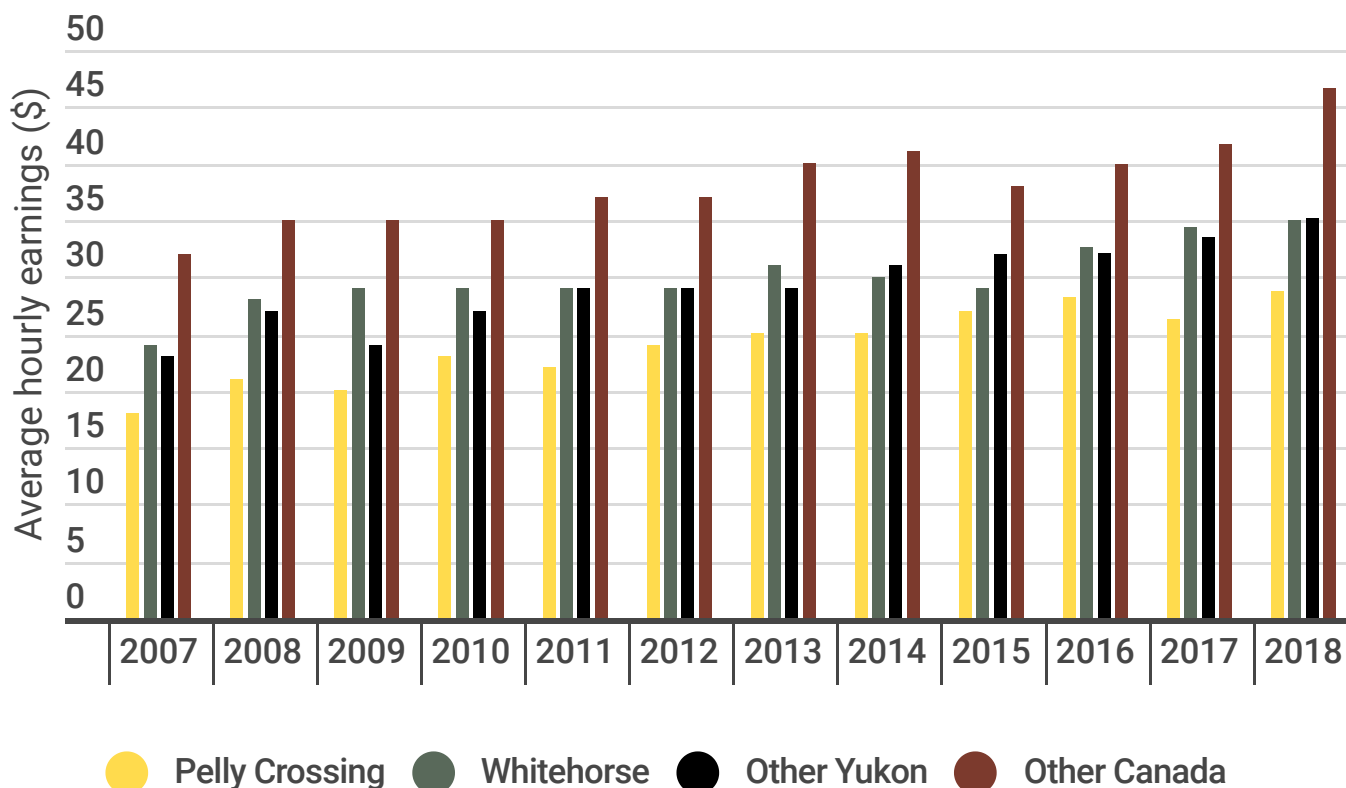
This section presents the available data for Indicator #16 (Average employment income by residency); Indicator #17 (Average employment income by Minto contractors); Indicator #18 (Minto and contractors annual and cumulative total employee income by residency); Indicator #19 (Average and distributed household income, average and distributed personal income); Indicator #21 (Income by source); and Indicator #22 (Number of Social Assistance Cases).

The data categories available (from Minto and its contractors) for Indicators #16, 17 and 18 are not consistent across contractors. Data for 2016 for contractors is missing for several Indicators. This data inconsistency may be attributed to data collection procedures on behalf of the previous company and contractors and the loss of data due to the sale of Minto Exploration Ltd. As the report moves to an online format, the intention is to update the data more regularly and thus reduce data quality concerns.

Indicator #16 Average Minto employment income by residency

This indicator measures direct income impacts, and any differentials of those impacts, on those people employed directly by Minto residing in various places. Figure 4-22 compares average hourly earnings for Minto employees by the place of residence of those employees.

Figure 4-22. Average hourly earnings (\$) of Minto employees by residency, per employee: 2007–2018



Source: Minto Explorations Ltd.

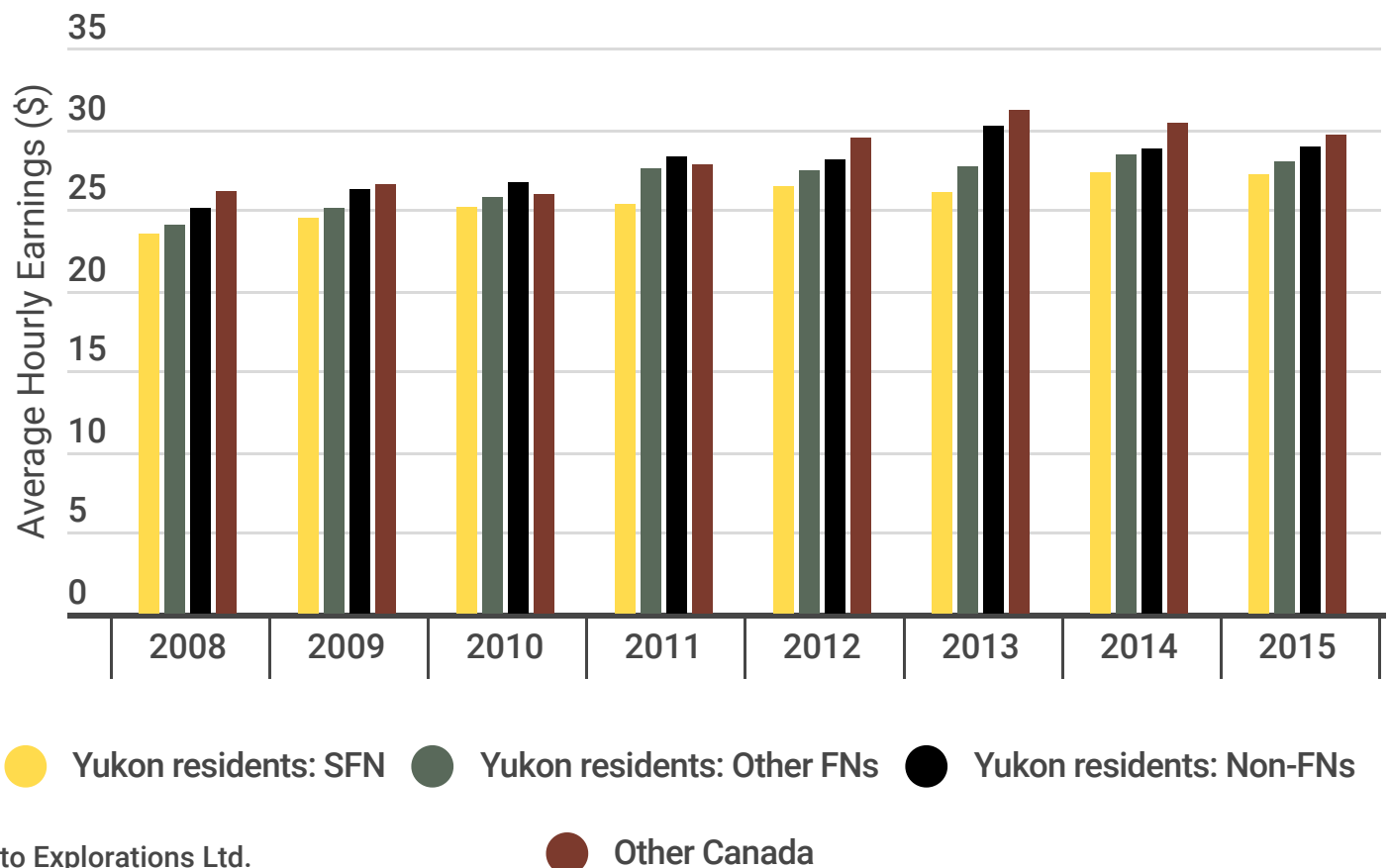
Notes on Figure 4-22:

- Employees who reside outside Yukon have higher average hourly earnings than those in Yukon; this is likely driven in part by the number of permanent and professional employees who reside outside Yukon.
- These numbers are influenced by the duration and nature of employment; they do not necessarily reflect the average earnings for a full-time full-year equivalent employee.
- Average hourly earnings for Pelly Crossing residents have remained similar between 2015 until 2018, whereas average hourly earnings of Whitehorse residents increased by ~20%, Yukon residents by 10% and other Canadian residents by just over 20% for the same time period.

Indicator #17 Average employment income by Minto contractors by residency and/or group

This indicator measures direct income impacts of the major contractors of the Minto Mine.

Figure 4-23. Average hourly earnings (\$) of employees of the surface-mining contractor at the Minto Mine, by group: 2008–2015.

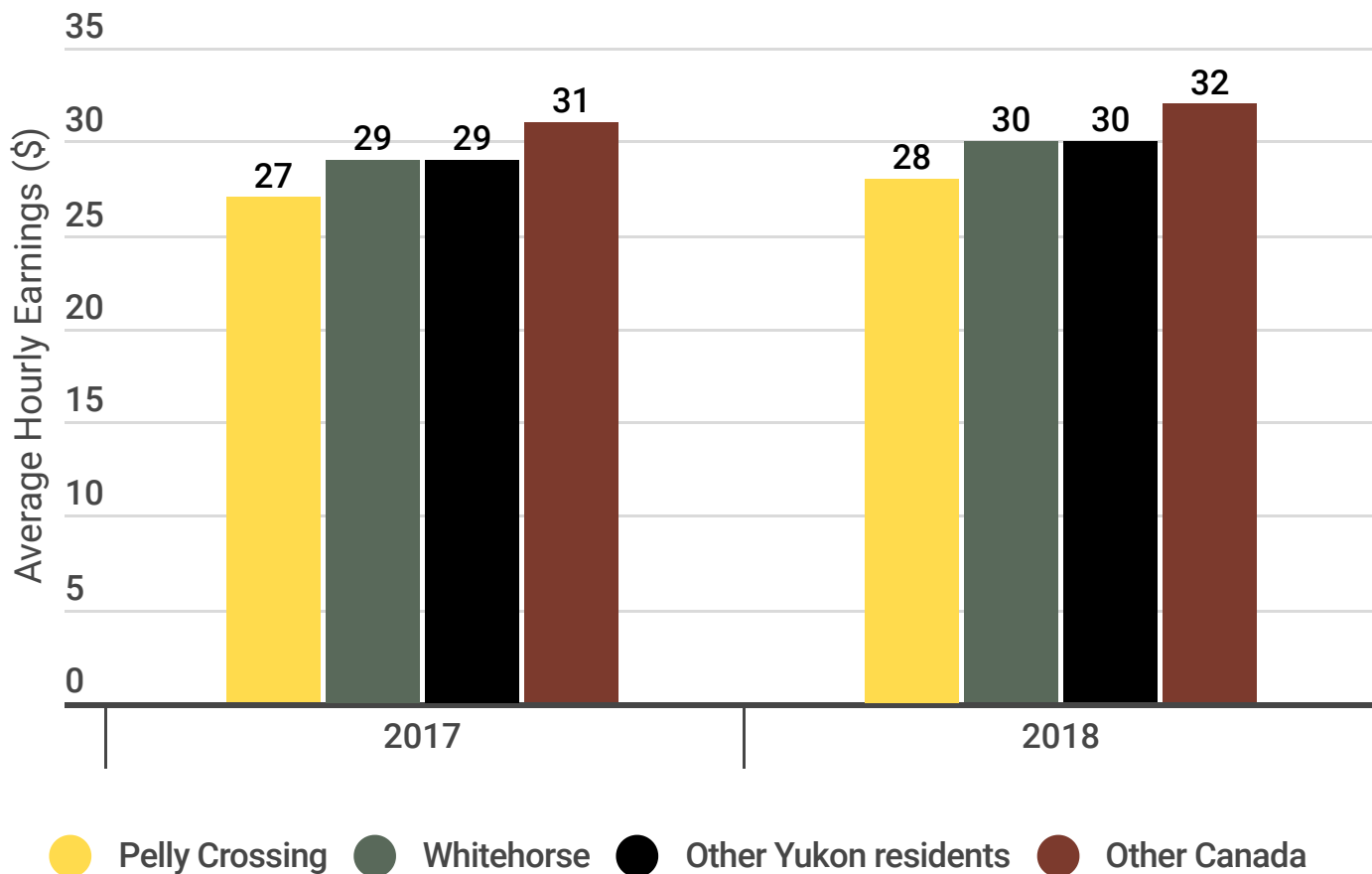


Source: Minto Explorations Ltd.

Notes on Figure 4-23:

- Rates for 2016, 2017 and 2018 are not available broken down by group. Rates are available by residency. That information is presented in Figure 4-23b.

Figure 4-23b. Average hourly earnings (\$) of employees of the surface-mining contractor at the Minto Mine, by residency: 2017–2018.

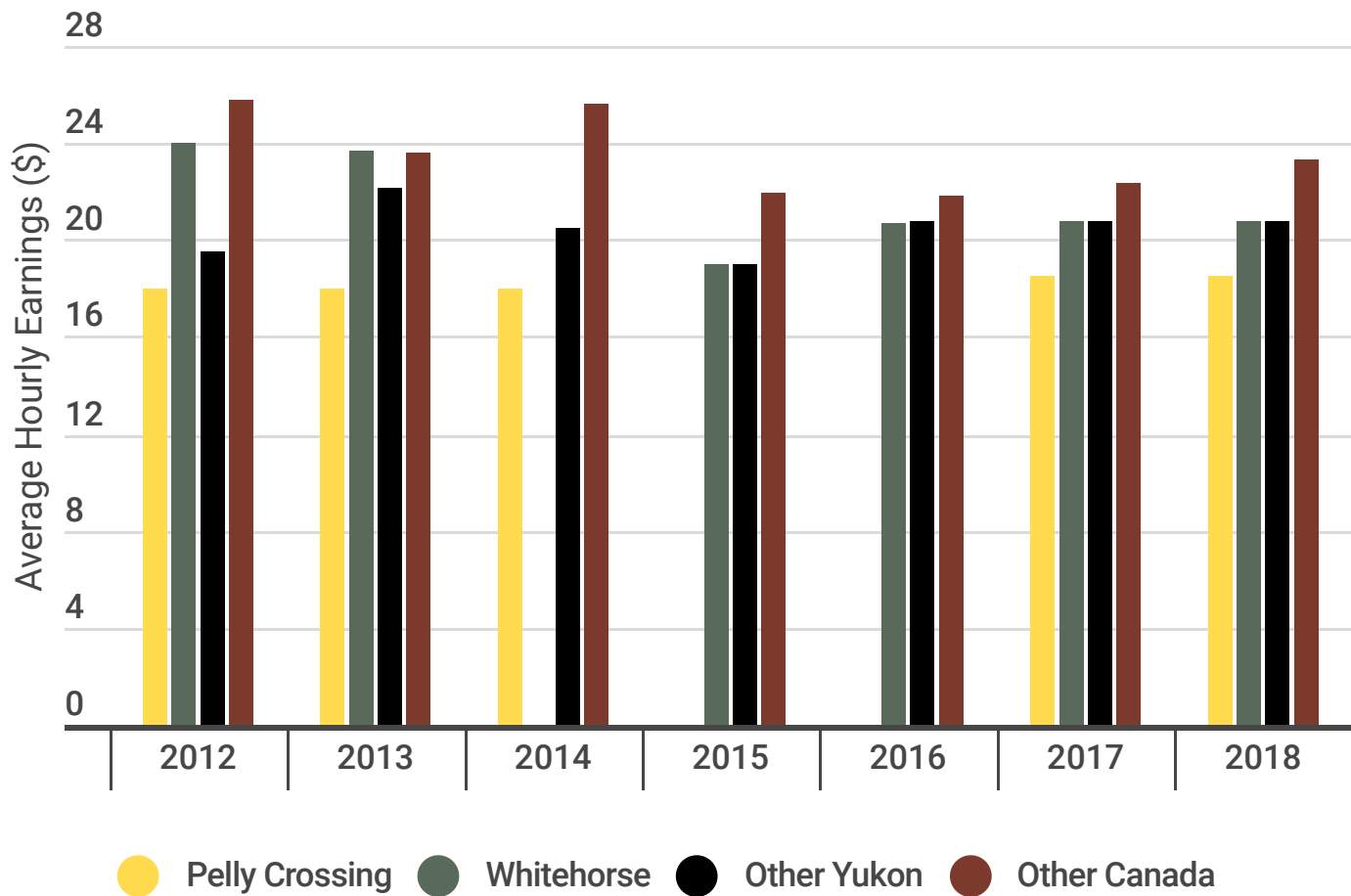


Source: Minto Explorations Ltd.

Notes on Figure 4-23b:

- Rates for Pelly Crossing are comparable to rates in Figure 4-24 for Selkirk First Nation. The hourly rate remained the same in 2017 and increased slightly in 2018.
- The same pattern holds since 2012 that other Canadians (outside of Yukon) are the highest paid with non-FN contractors earning more than FN contractors.

Figure 4-24. Average hourly earnings (\$) of employees of the underground mining contractor at the Minto Mine, by residency: 2012–2018

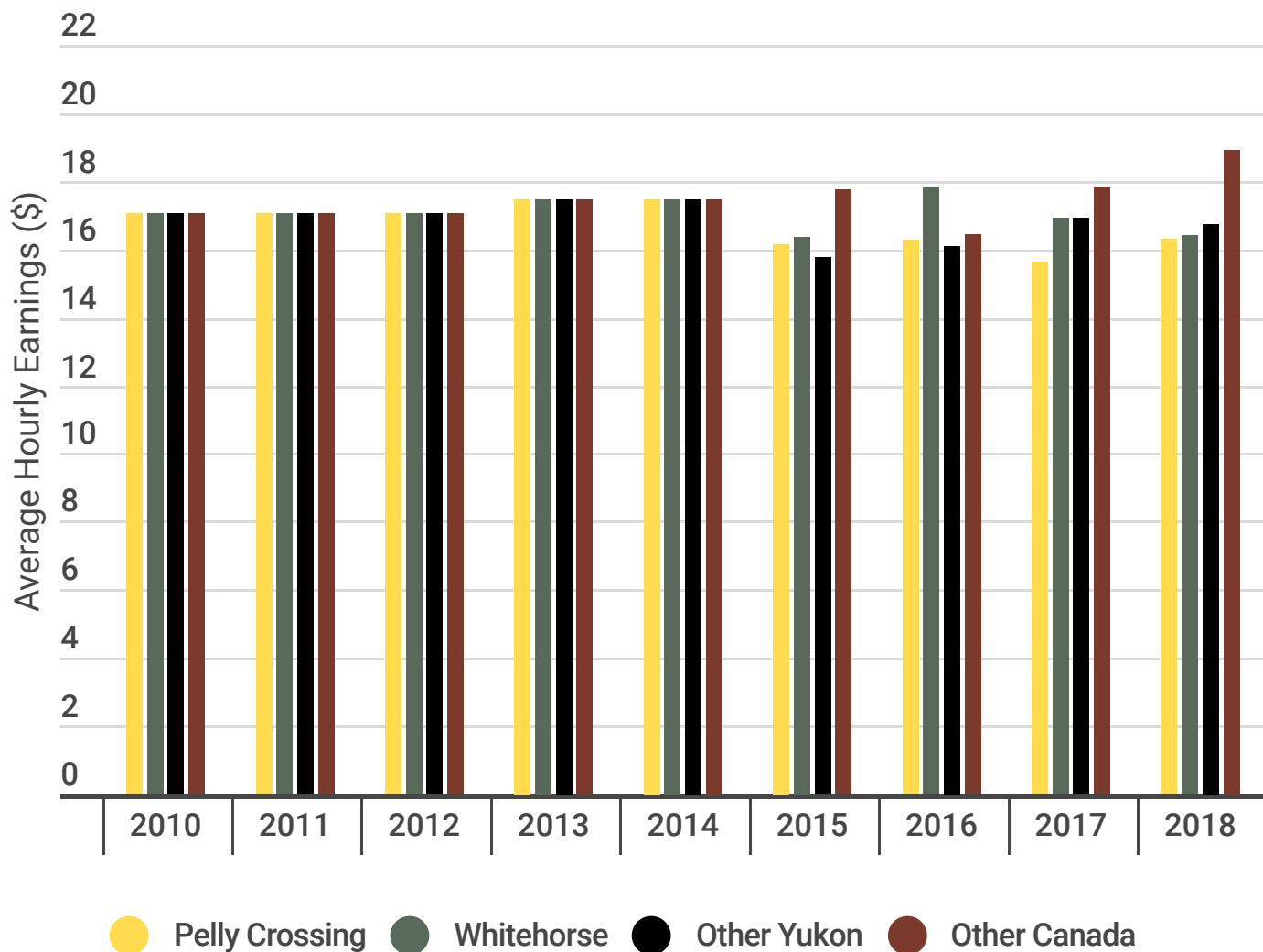


Source: Minto Explorations Ltd.

Notes on Figure 4-24:

- Average hourly earning of Minto Mine's underground mining contractor personnel residing elsewhere in Canada have generally had higher hourly wages than those residing in Yukon. This is likely due to these personnel having more specialized experience in underground mining. These rates were at a peak in 2014 and have gone up marginally from 2015 to 2018.
- Average hourly earning of Minto Mine's underground mining contractor personnel residing in Whitehorse and in other areas in Yukon have remained stable from 2016 through until 2018.

Figure 4-25. Average hourly earnings (\$) of employees of the camp contractor at the Minto Mine, by residency: 2010–2018



Source: Minto Explorations Ltd.

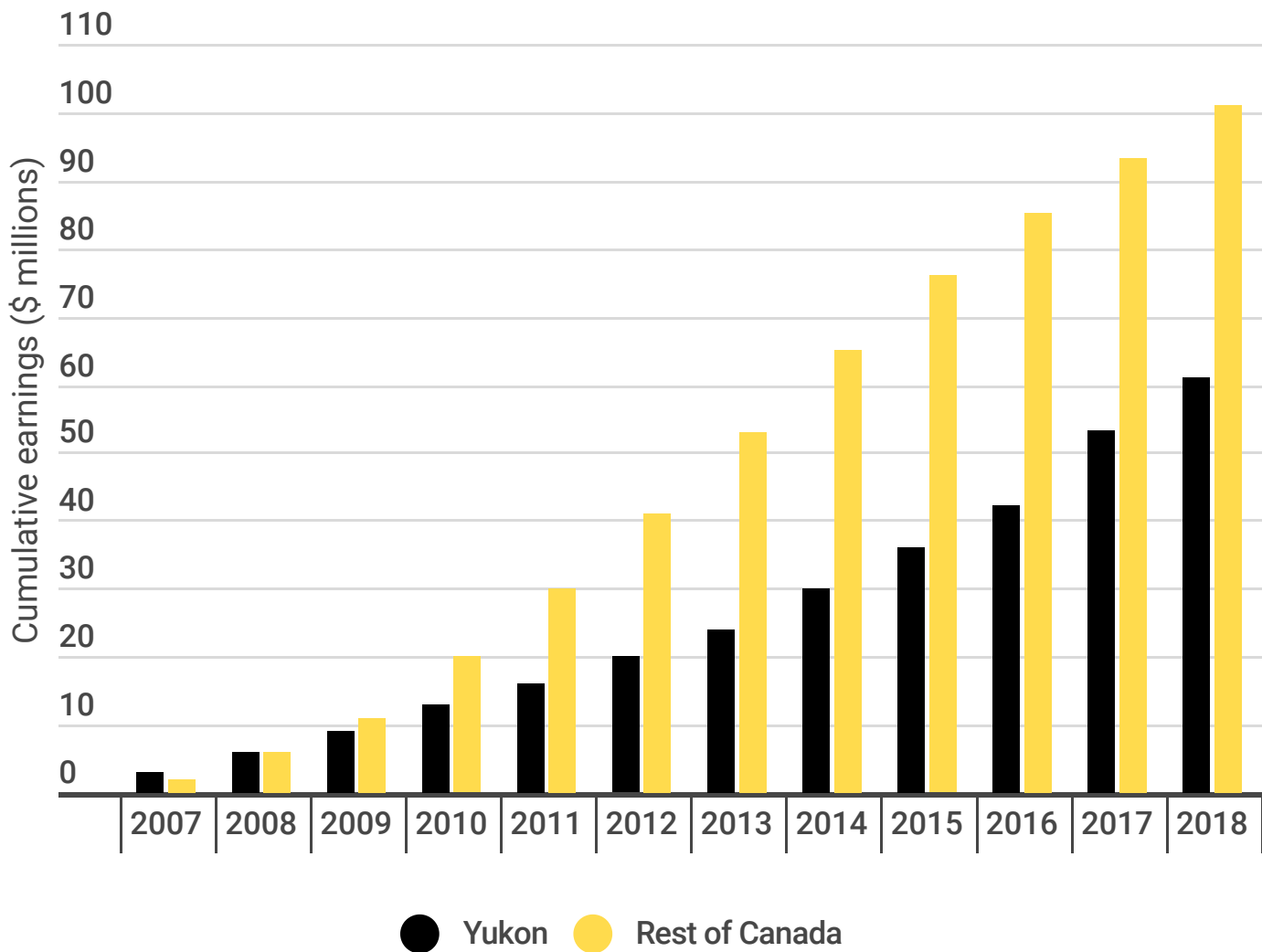
Notes on Figure 4-25:

- The camp contractor supplies the food and cleaning services for the camp at the Minto Mine. The majority of the employees working for the camp contractor are entry level and non-skilled workers.
- From 2016 – 2018, there was a minimal difference in average hourly wages for camp contractor personnel from outside of Yukon, whereas the average hourly wages for camp contractor personnel from residency areas within Yukon remained relatively similar except in 2016 when there was an increase in the average hourly rate for camp contractor personnel from Whitehorse.

Indicator #18 Minto and contractors' cumulative total annual employee income by residency or group

Indicator #18 is intended to measure both the direct and cumulative impacts of employment income by residency – Yukon and non-Yukon, with some details on residents of Pelly Crossing and/or SFN – for Minto and its major contractors.

Figure 4-26. Cumulative earnings (\$ millions) by employees of Minto, by residency (Yukon and Rest of Canada), 2007–2018

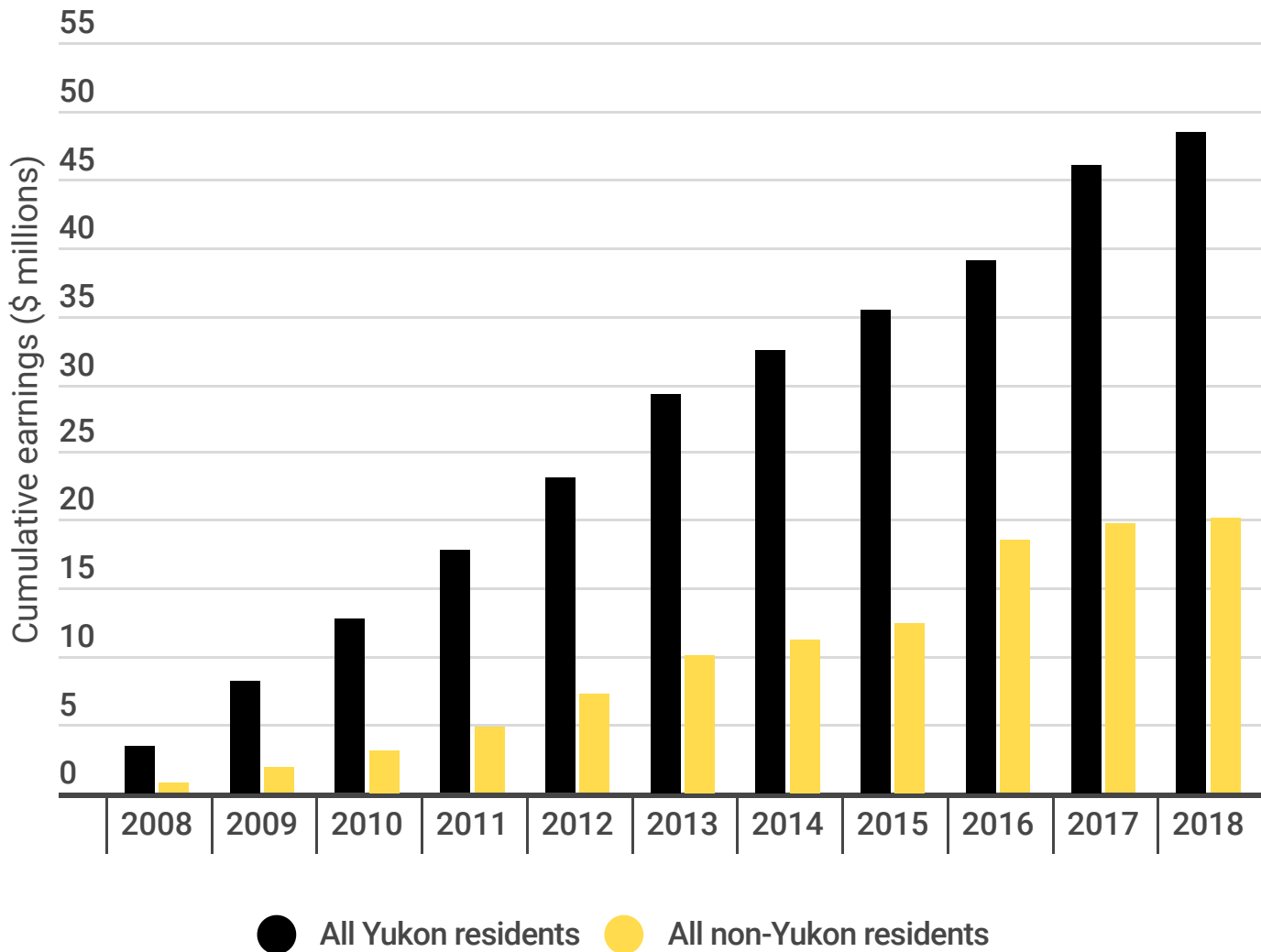


Source: Minto Explorations Ltd.

Notes on Figure 4-26:

- Employees living outside Yukon account for the majority of the cumulative earnings from Minto, with a total of \$101 million from 2007 to 2018. Yukon residents accounted for \$61 million over the same time frame.
- Between 2016 and 2018, there has been an upward trend in the amount of money earned by Yukon residents while working at Minto. This increase demonstrates the importance of hiring in Yukon.

Figure 4-27. Cumulative earnings (\$ millions) by employees of surface-mining contractor, by residency (Yukon and Rest of Canada), 2008–2018

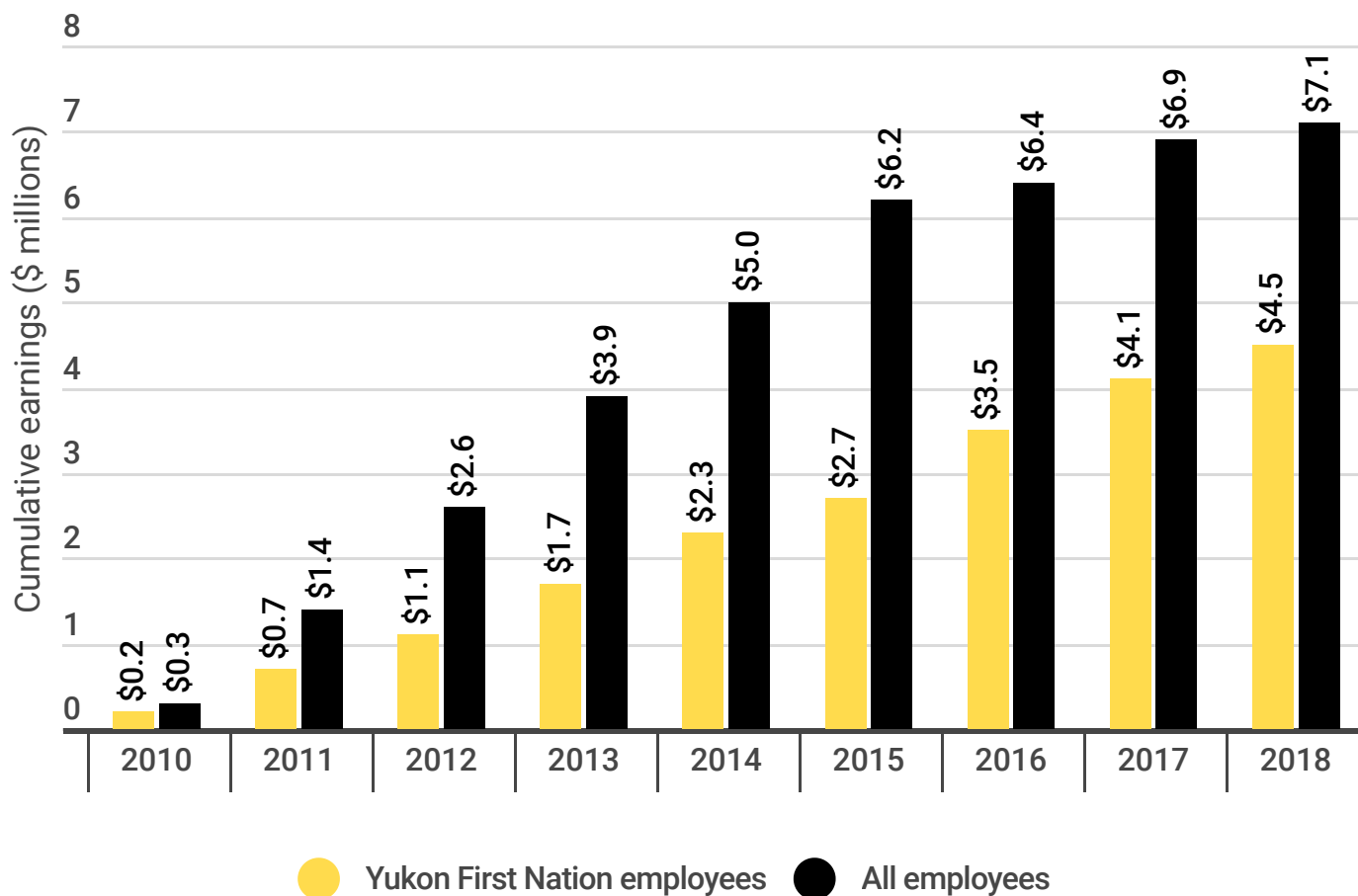


Source: Minto Explorations Ltd.

Notes on Figure 4-27:

- The surface-mining contractor is a Yukon-based company and the skills required for surface mining are readily available in Yukon. This is reflected in the large majority of its payroll flowing to Yukon residents.
- By the end of 2018, Yukon residents had earned a cumulative \$48.4 million from the surface mining contractor.
- In 2016, when Minto North finished, the majority of surface mining personnel were laid off. By September 2018, there were no more surface mining personnel on site. Going forward, Minto is not surface mining. However, there are still contractors performing tasks at surface that will be included in upcoming reports.

Figure 4-28 . Cumulative earnings (\$ millions) of the camp contractor employees, by group (Yukon FN and All Employees), 2010-2018

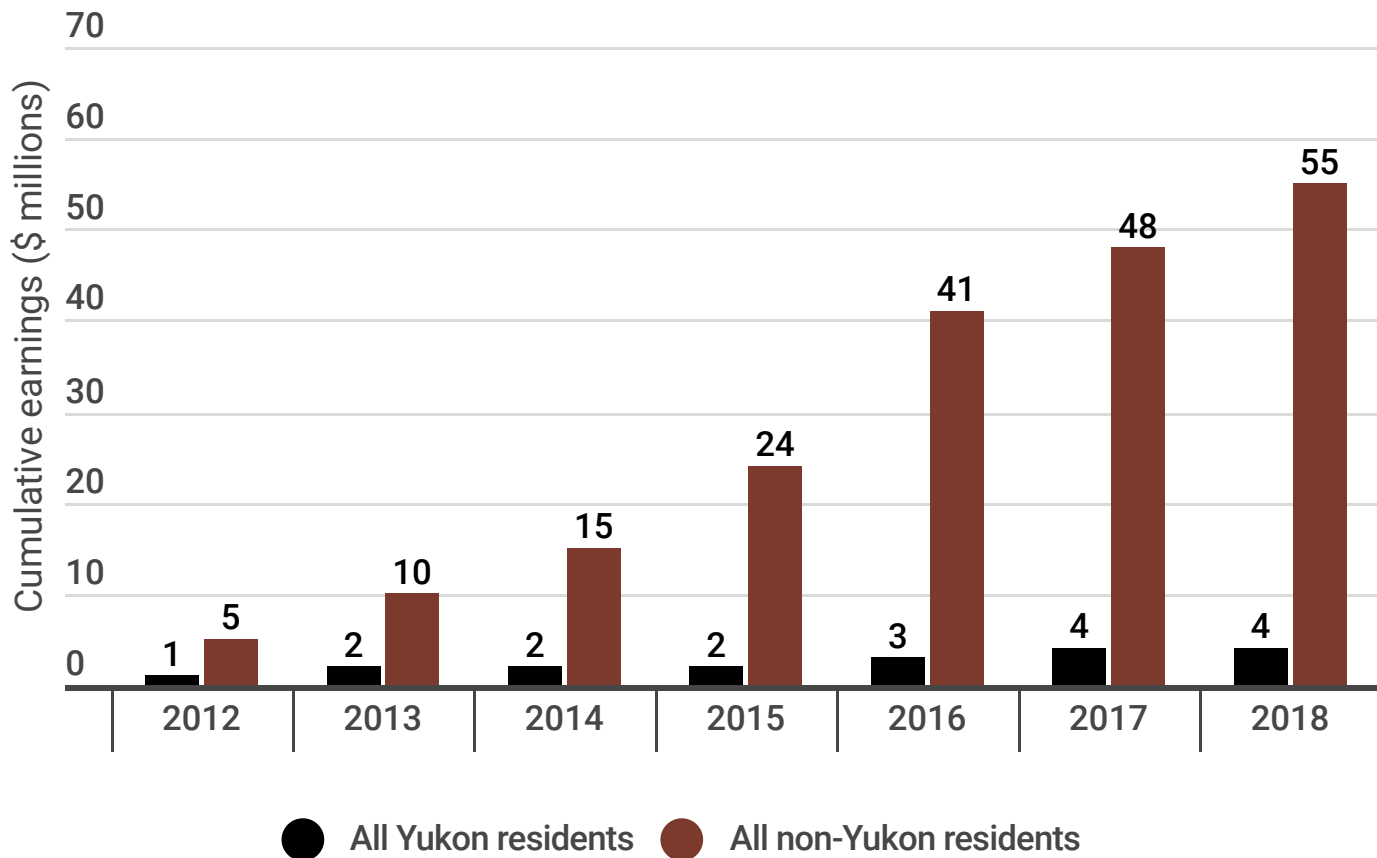


Source: Minto Explorations Ltd.

Notes on Figure 4-28:

- Camp contractor employees are often recruited and available within Yukon as certain role requirements are less technically specified. FN employees of the camp contractor have received approximately two-thirds of the total cumulative payroll since 2010. This proportion has improved since 2015 and cumulative earnings rose by 10 million between 2016 and 2018.

Figure 4-29. Cumulative earnings (\$ millions) of employees of underground mining contractor at Minto Mine, by Yukon and other Canada residency: 2012–2018



Source: Minto Explorations Ltd.

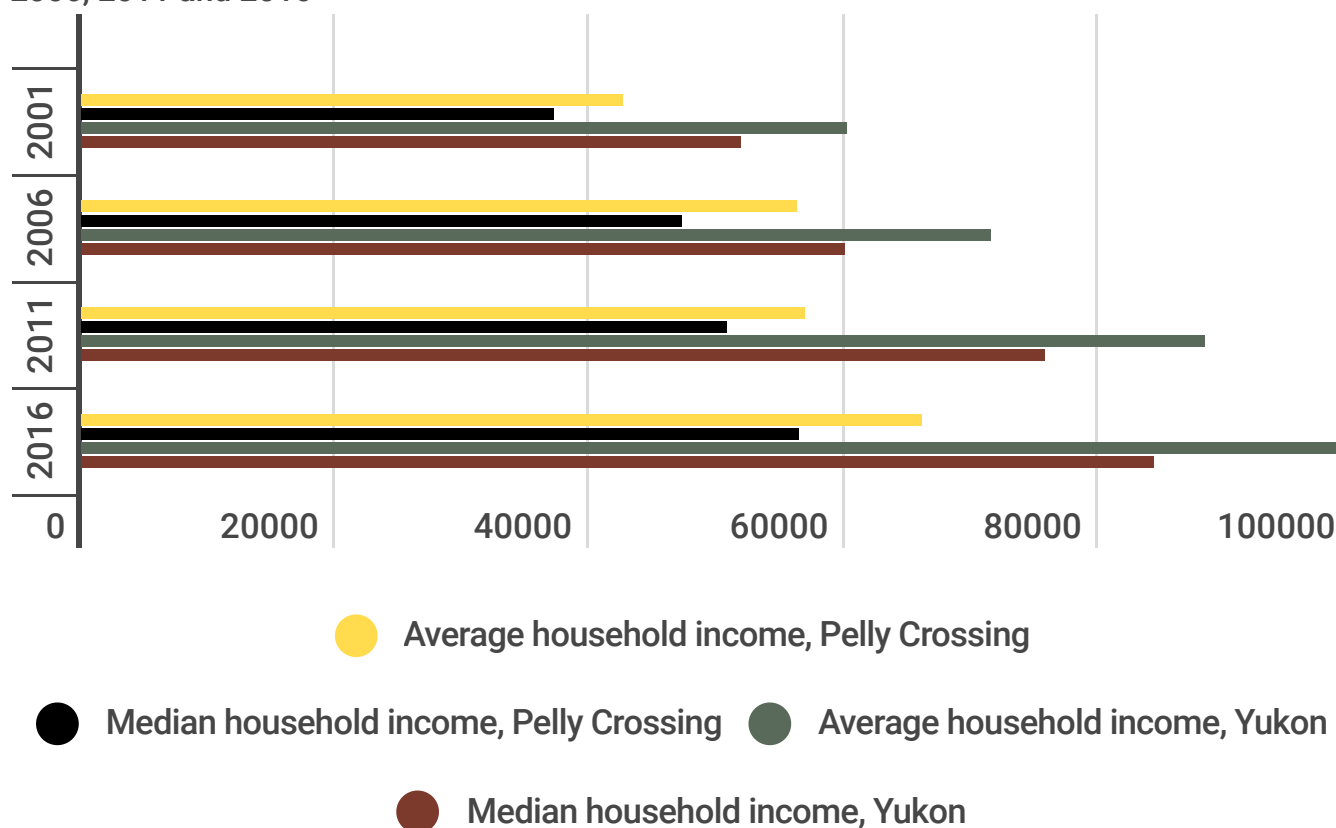
Notes on Figure 4-29:

- Well over 90% of the underground contractor’s payroll went to employees who live outside Yukon in 2015 and 2018. By 2018, close to 93% of the underground contractor’s payroll went to employees who live outside Yukon.
- The underground mining contractor relies heavily on specialized, skilled underground workers from elsewhere in Canada due to the lack of those necessary skills and experience in the Yukon workforce.

Indicator #19 Average and distribution of household income

Average household incomes and the distribution of household incomes reflect relative material wealth within the community. Figure 4-30 compares the average and median household incomes in Pelly Crossing with Yukon as a whole.

Figure 4-30. Average and median household income (\$), Pelly Crossing and Yukon: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA

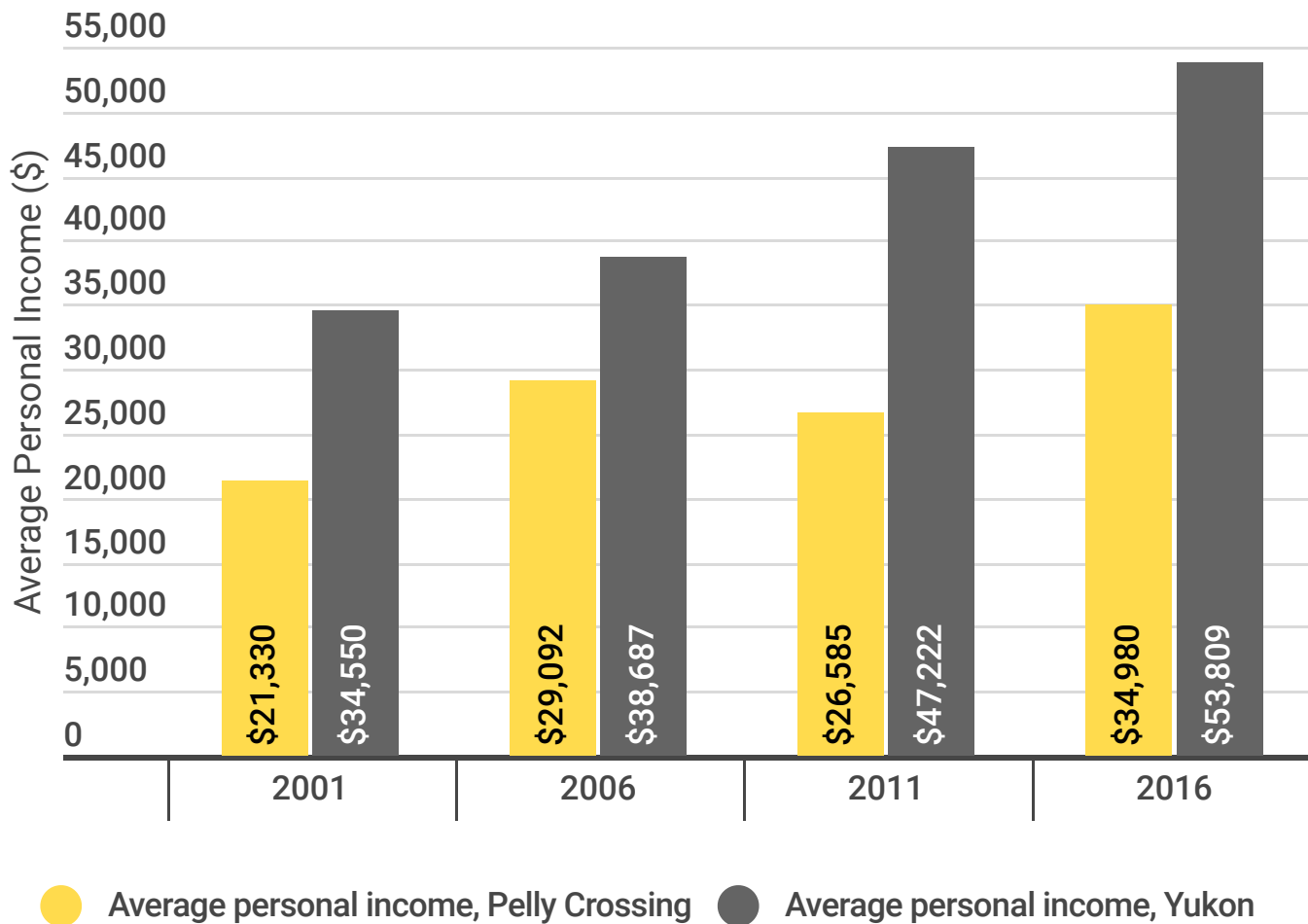
Notes on Figure 4-30:

- Both average and median household incomes are lower in Pelly Crossing than in Yukon as a whole. Although household income in Pelly Crossing was lower than that in Yukon, it grew at the same rate as the Yukon household income between 2001 and 2016 (34 or 36% versus 39%).
- The Pelly Crossing median household income for 2011 must be treated with caution. Pelly Crossing had a much lower response rate to the 2011 NHS than Yukon as a whole (see Section 1.3). It is unlikely that household income remained flat within Pelly Crossing while the household income in the rest of Yukon grew by 26%.

Indicator #20 - Average and Distribution of Personal Income of SFN Citizens in Yukon

Indicator #20 reflects relative material wealth within the community, but at the individual rather than the household level. Figure 4-32 shows the average personal incomes for Yukon and Pelly Crossing as reported by the Census in 2001, 2006 and 2016 and the 2011 NHS.

Figure 4-32. Average Personal Incomes, Pelly Crossing and Yukon: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Census Profile, 2016 Census

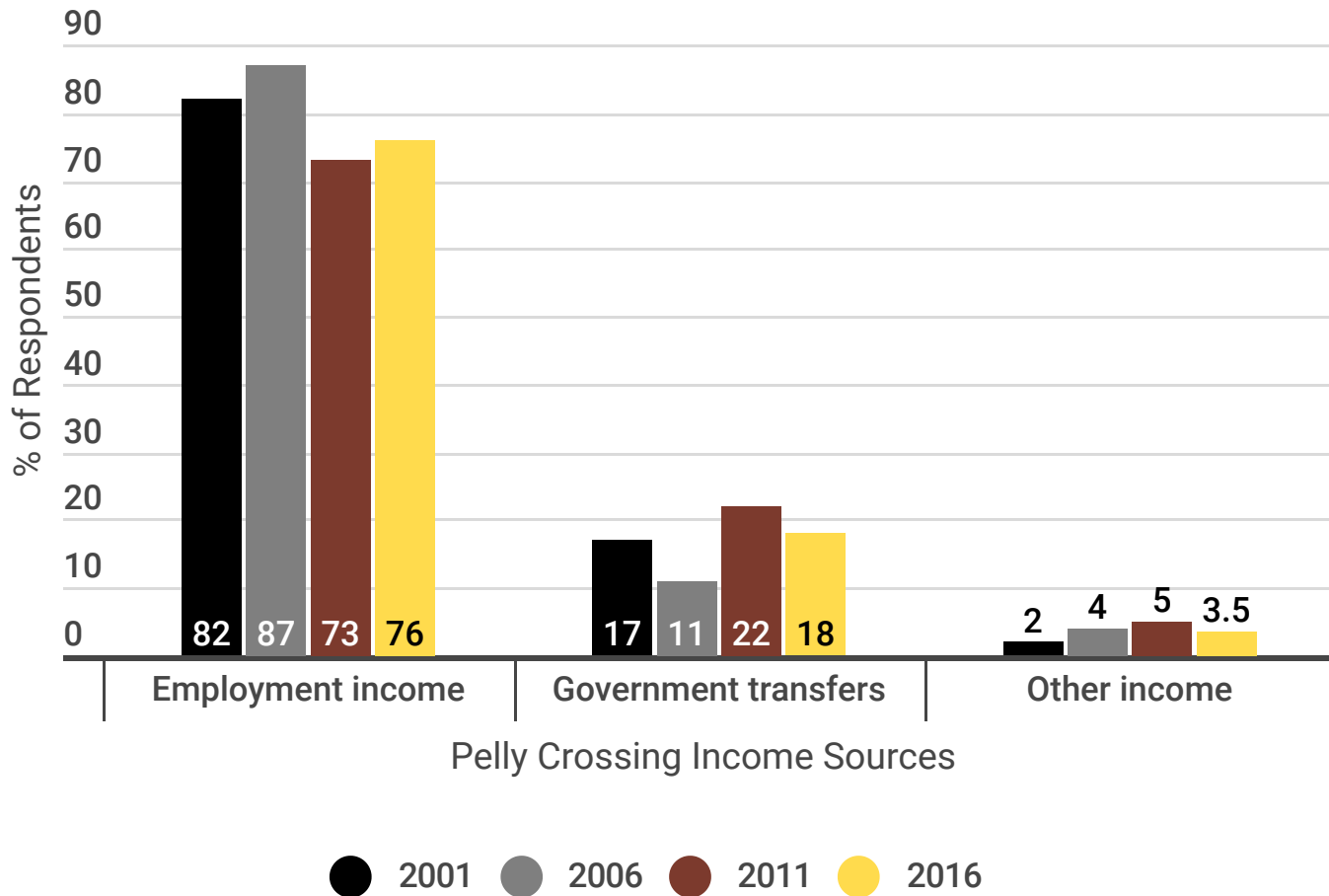
Notes on Figure 4-32:

- Average personal Yukon income increased by 14% between 2011 and 2016.
- Average personal income in Pelly Crossing increased by 31% between 2011 and 2016.

Indicator #21 - Income by Source

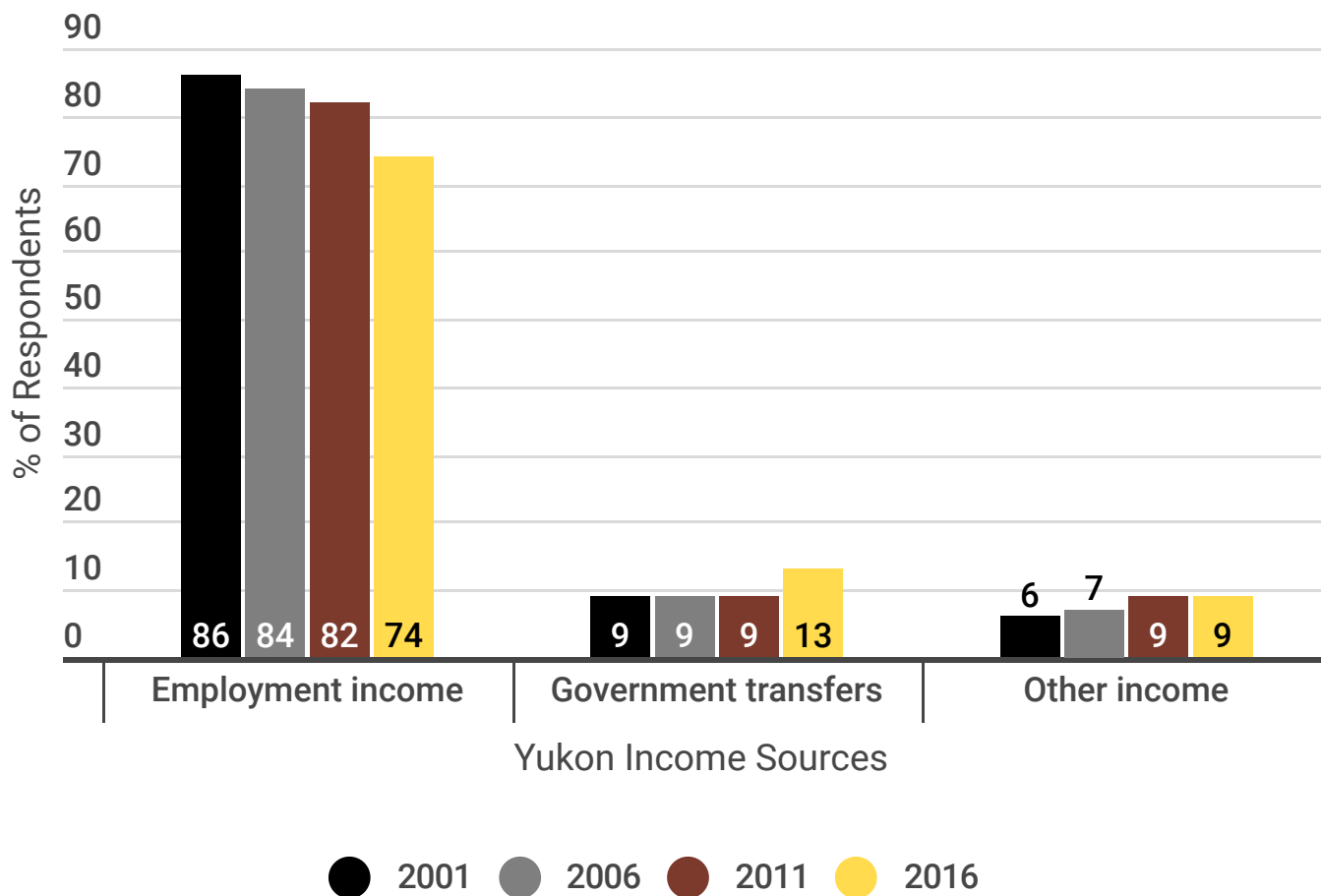
This indicator reflects levels of dependency on various income sources within the community. Figure 4-34 shows the breakdown of income by source: employment (including self-employment), government transfers of all kinds (including Canada Pension Plan and Employment Insurance), and all other income (mostly investment income).

Figure 4-34a - Sources of Income of SFN Citizens in Pelly Crossing: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Census Profile, 2016 Census

Figure 4-34b - Sources of Income of SFN Citizens in Yukon: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Census Profile, 2016 Census

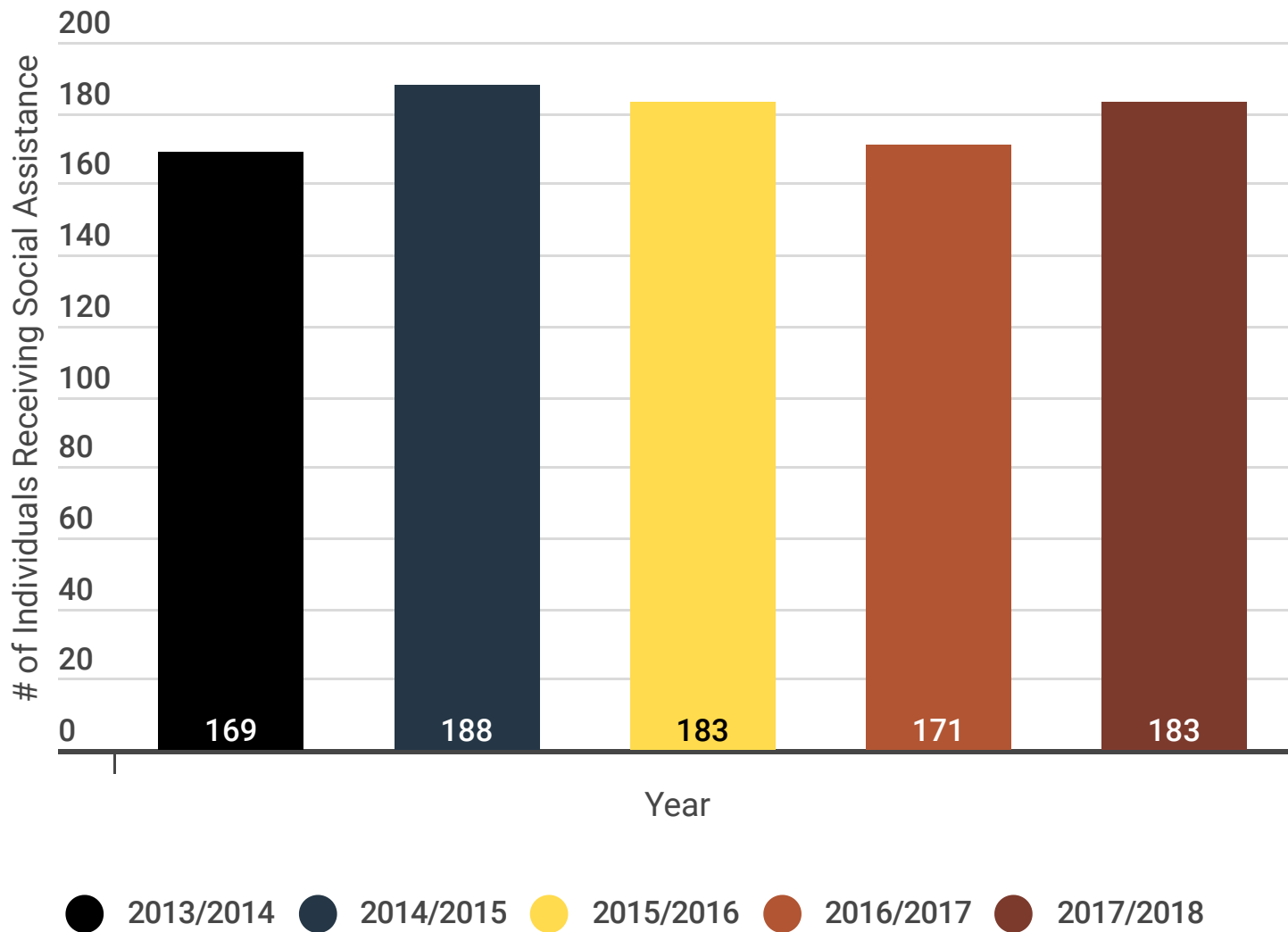
Notes on Figure 4-34:

- There has been a general downward trend in employment income from 2011 to 2016 in Yukon, along with a general upward trend in government transfers.
- In Pelly Crossing, between 2011 and 2016, employment income remained relatively stable whereas government transfers went down marginally.

4.5.7 Indicator #22 - Number of Social Assistance Cases

This indicator identifies the number of SFN individuals receiving social assistance in Pelly Crossing.

Figure 4-36 - Number of Individual SFN Citizens Receiving Social Assistance in Pelly Crossing



Source: SFN

Notes on Figure 4-36:

- The number of cases has varied from 169 to 188 with no clear trend over time.

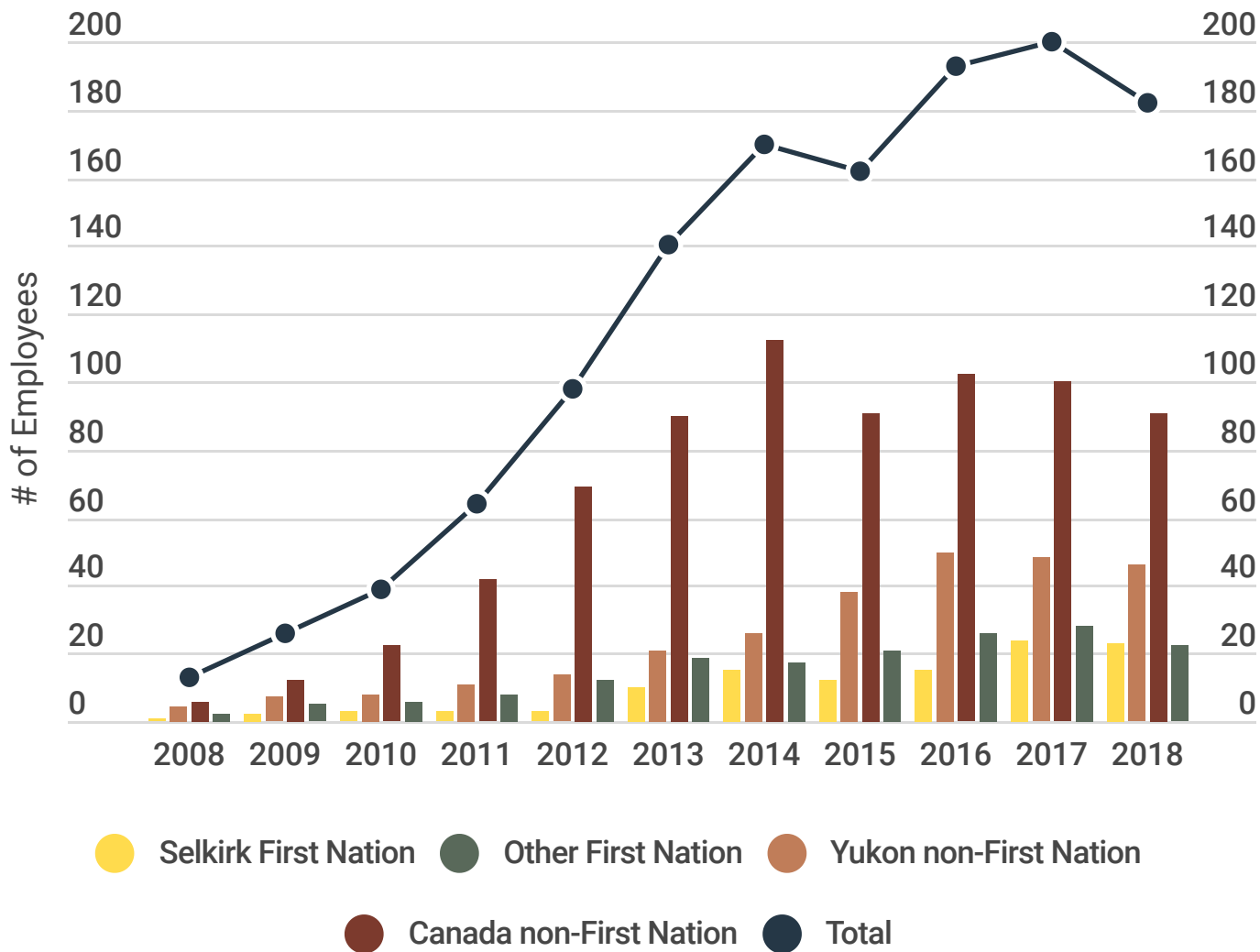
4.6 Employment

This section presents the available data for Indicator #23 (Minto's northern employment by group); Indicator #24 (Minto's northern employment by residency); Indicator #25 (Employment by contractors), Indicator #26 (Minto new hires for operations by group); Indicator #27 (Minto employment by job category and group); Indicator #28 (Employment rate); Indicator #29 (Unemployment rate); Indicator #30 (Participation rate); and Indicator #31 (Employment by sector).

Indicator #23 Minto employment by group

This indicator is intended to measure Minto employment by group: SFN, Other First Nation (OFN), Yukon non-First Nation, and other (Canada).

Figure 4-38. Minto employee counts by group: 2008-2018



Source: Minto Explorations Ltd.

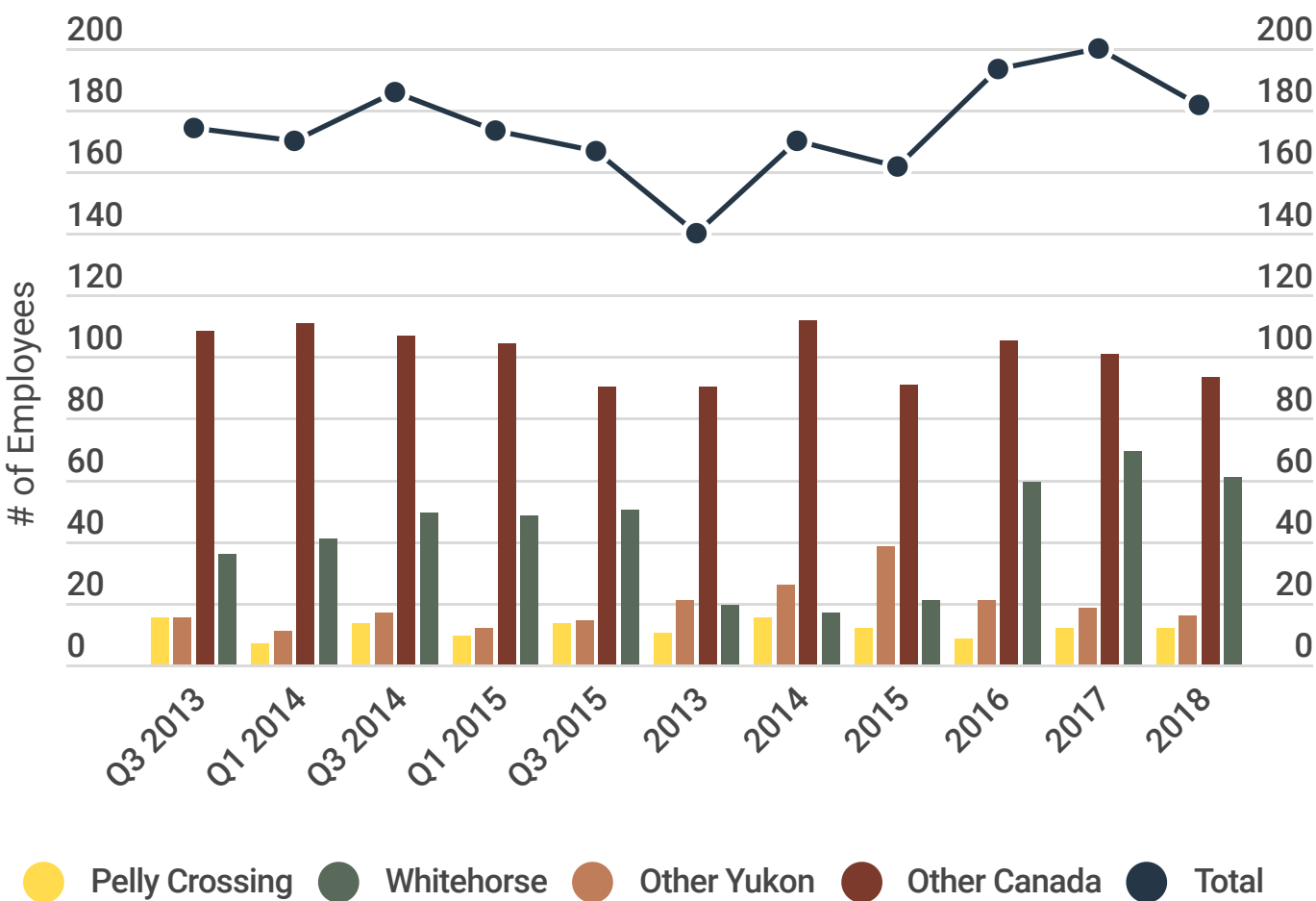
Notes on Figure 4-38:

- Between 2016 to 2018, the employee count for SFN citizens, OFN citizens and non-First Nation Yukon employees are on par with the Canada non-First Nation employee count. This is a positive indicator as during 2013 to 2015 the employee count for SFN citizens, OFN citizens and non-First Nation Yukon employees was 50% of the Canada non-First Nation employee count.

Indicator #24 Minto employment by residency

This indicator is intended to measure Minto employment by residency: Pelly Crossing, Whitehorse, Yukon and Canada.

Figure 4-39. Minto employee counts by residency: Q3 2013 – 2018



Source: Minto Explorations Ltd.

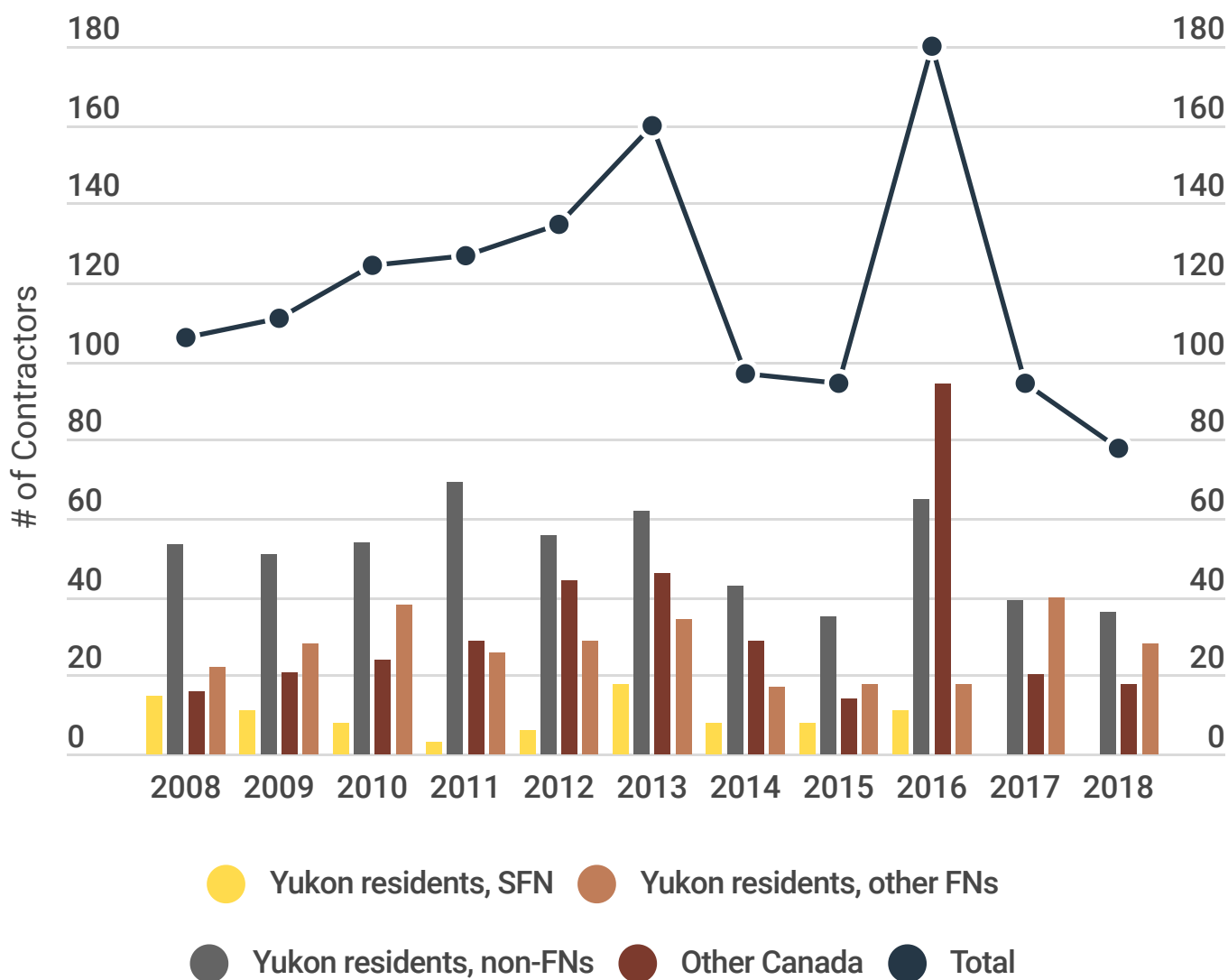
Notes on Figure 4-39:

- Pelly Crossing Minto employee counts by residency went down in 2016 but in 2017 and 2018 the rates increased by 50%. Whitehorse residents more than doubled between 2015 to 2016 and these higher counts remained a constant through 2018. Other Yukon residents numbers declined between 2015 and 2018.
- For 2018, the values were the highest count for 2018 as the mine entered temporary closure with a skeleton crew in October 2018. Thus, year end numbers are not comparable to previous years.

Indicator #25 Employment by contractors

This indicator measures employment by residency of the mine's major contractors.

Figure 4-40. Surface mining contractor employee counts by group and residency: 2008–2018

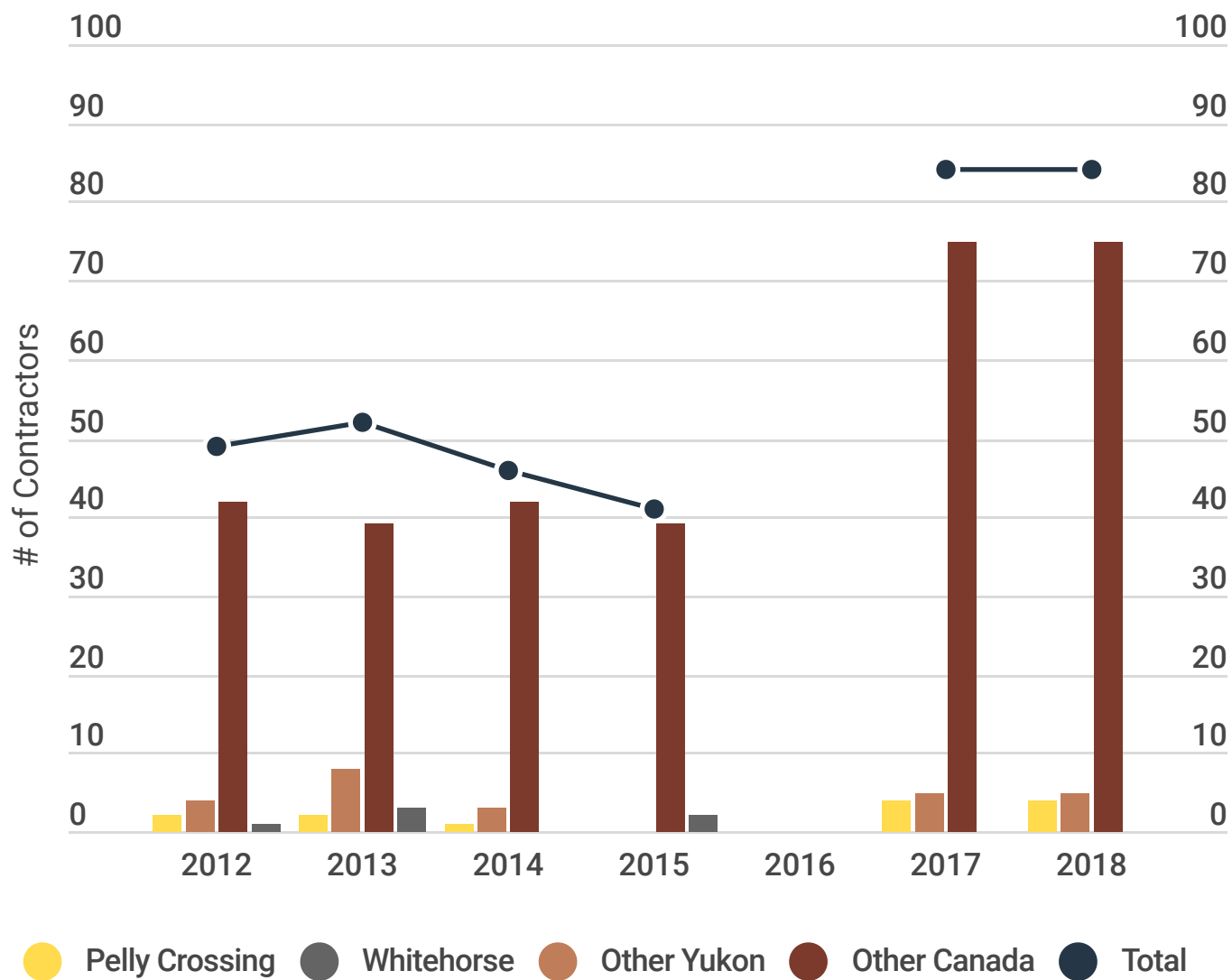


Source: Minto Explorations Ltd.

Notes on Figure 4.40:

- The data in 2017 and 2018 combines all Yukon First Nations (does not separate out SFN); thus, the number was assigned to Yukon residents, other FNs. 2017 had a significant increase in Yukon FN contractors (40) from 2016 as part of a total increase in contractors.

Figure 4-41. Underground mining contractor employee counts by residency: 2012–2018

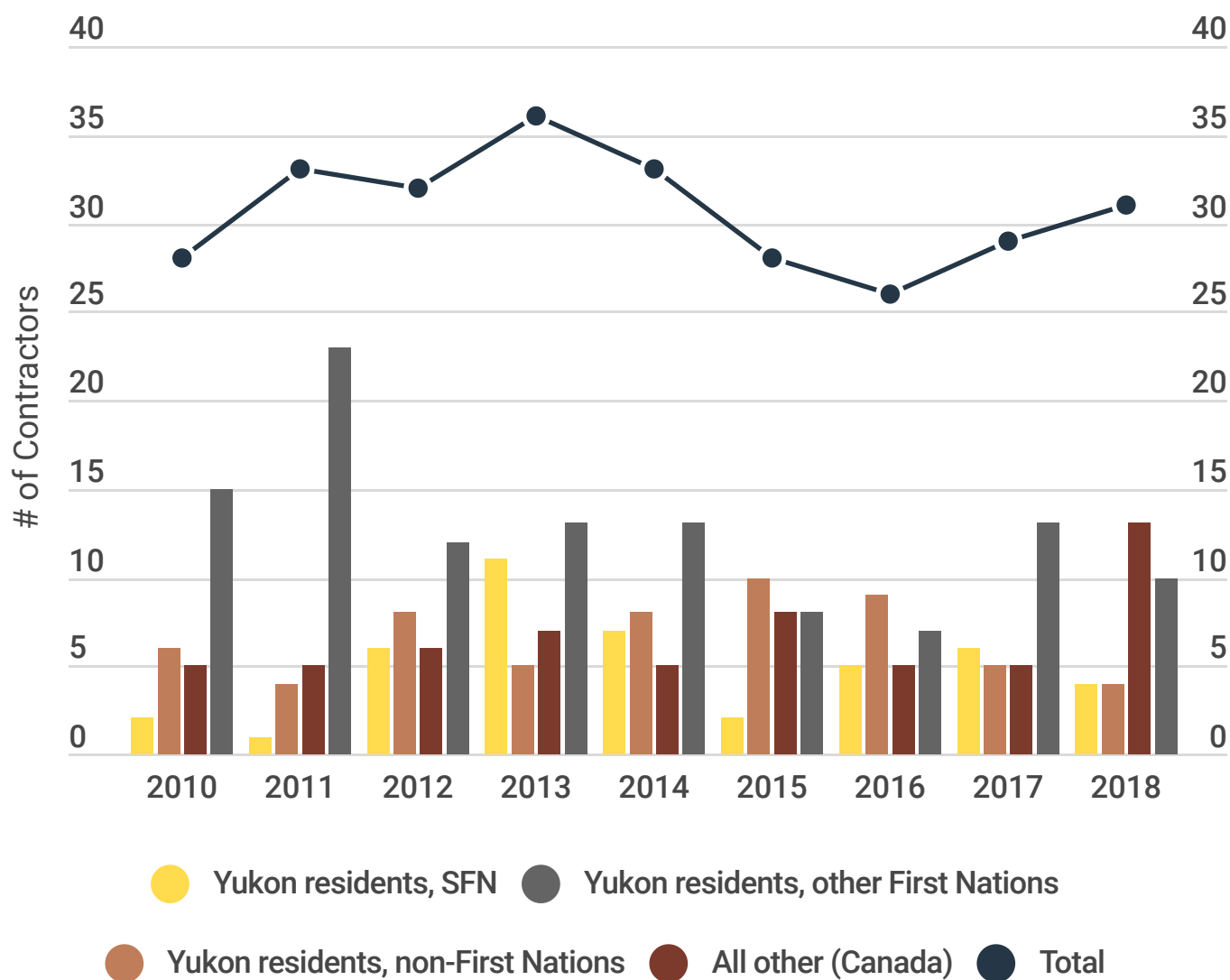


Source: Minto Explorations Ltd.

Note on Figure 4-41:

- No new data for this indicator is available in 2016. The data for 2017 and 2018 does not specify Whitehorse as a possible location so the workers from Whitehorse are included in the other Yukon data.

Figure 4-42. Camp contractor employee counts by group and residency: 2010–2018



Source: Minto Explorations Ltd.

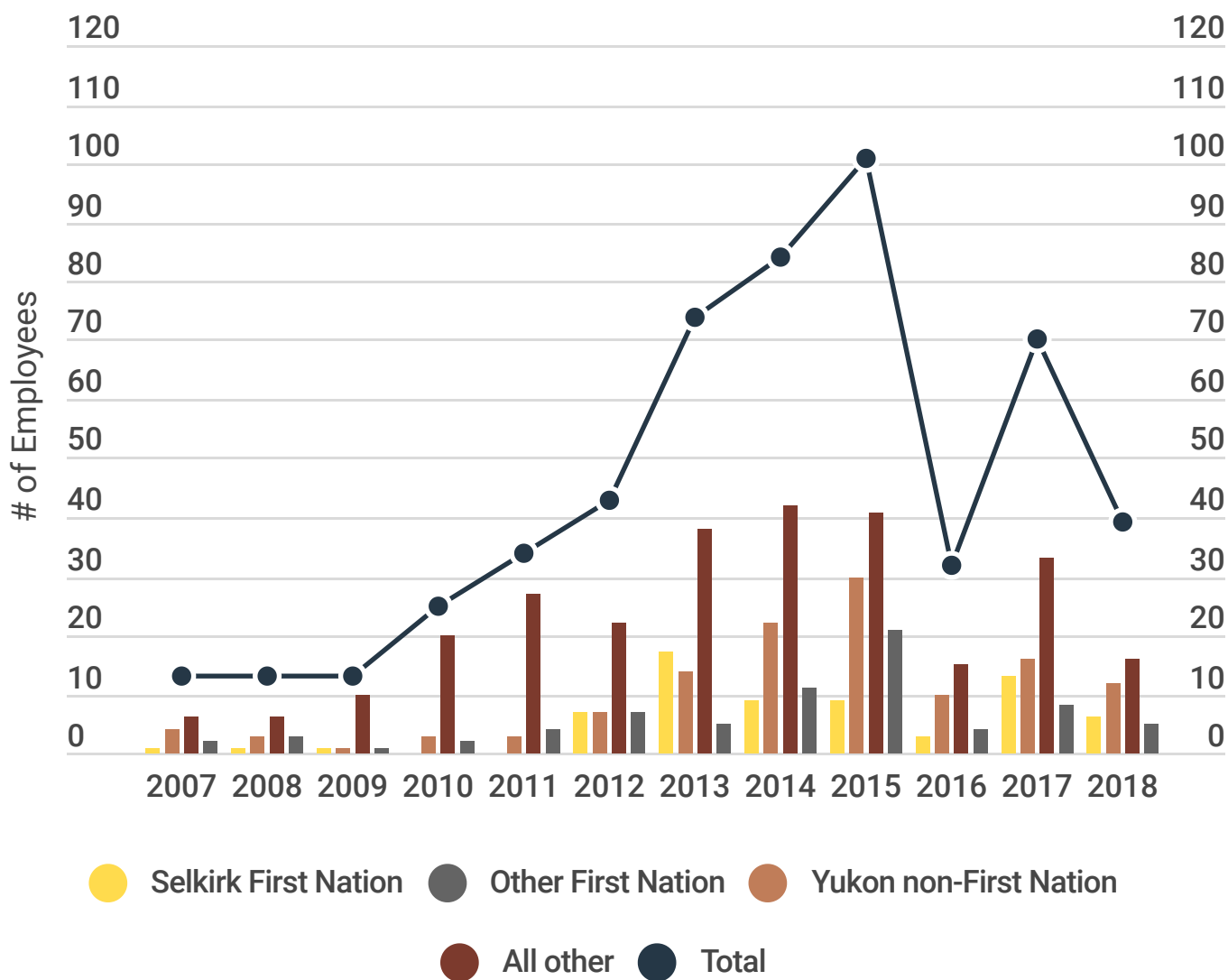
Notes on Figure 4-42:

- In 2016, 71% of camp contractor’s employees were Yukon residents. In 2017, this rate increased to 82% and then decreased to close to 68% in 2018.

Indicator #26 Minto new hires for operations by group

This indicator measures new hires by group – Selkirk First Nations, Other First Nations, Yukon non-First Nations, and all other (Canada). Hiring decisions are driven by the balance between a number of factors such as the availability of the skills and experience required; the ability and willingness of the employer to take on trainee employees; the costs associated with the hire (e.g. fly-in employees versus local); and the ability of new hires to pass the industry-standard employment screening. Additionally, Minto Mine practices preferential hiring of Selkirk First Nations citizens, Pelly Crossing residents and Northern Tutchone citizens, in that order, depending on required job skills and experience.

Figure 4-43. Minto new hires by group: 2007–2018



Source: Minto Explorations Ltd.

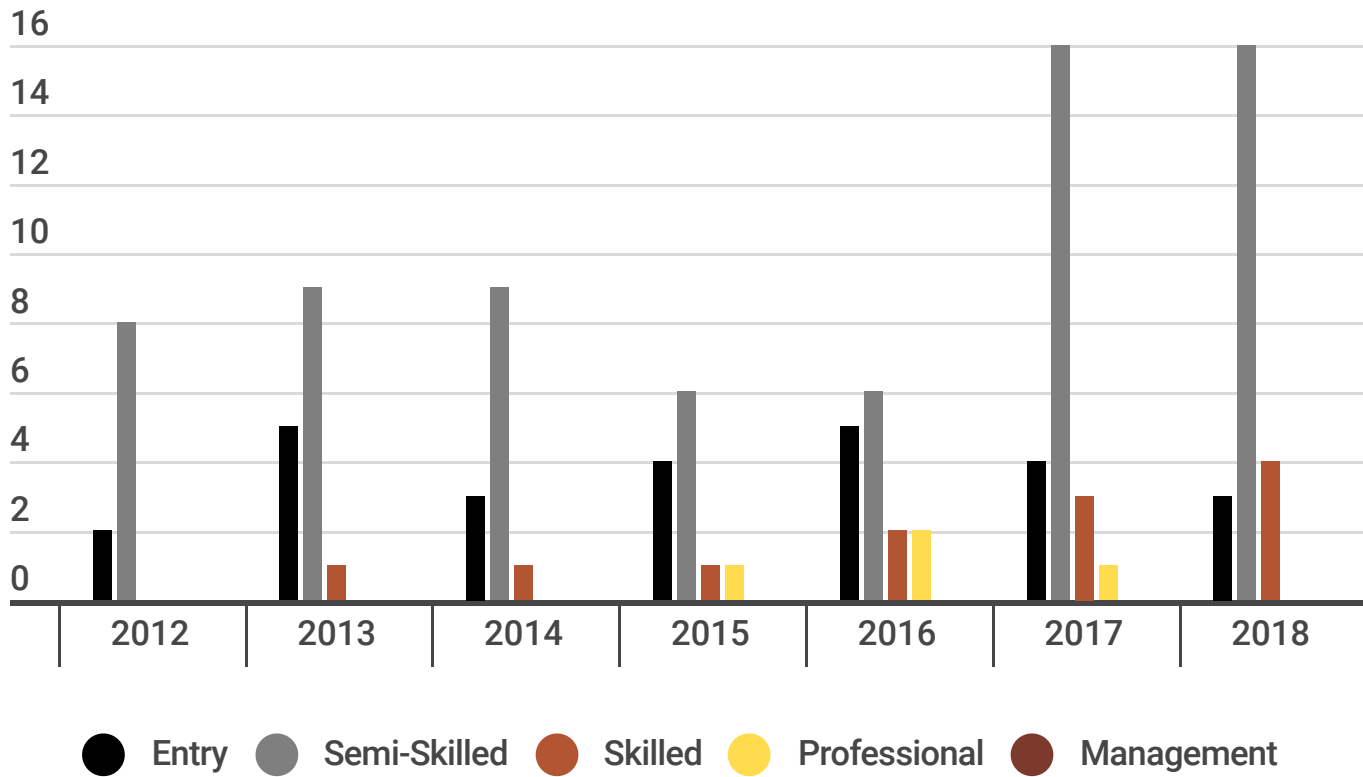
Note on Figure 4-43:

- Selkirk First Nation new hires occurred primarily from 2012 and continued through to 2018 with the highest hiring years in 2013 and 2017 respectively.
- Since 2013, Minto Mine practices made a focused effort on increasing both Selkirk First Nations and local (Yukon) workforce representation. Selkirk First Nations and Other First Nations specific training measures are in place. New hiring levels for the three year (2013 to 2015) trend were 45% higher than the three year trend (2016 to 2018). 2018 levels were likely impacted by the proposed sale and then entering into temporary closure resulting in fewer employees being hired.

Indicator #27 Minto employment by job category and group

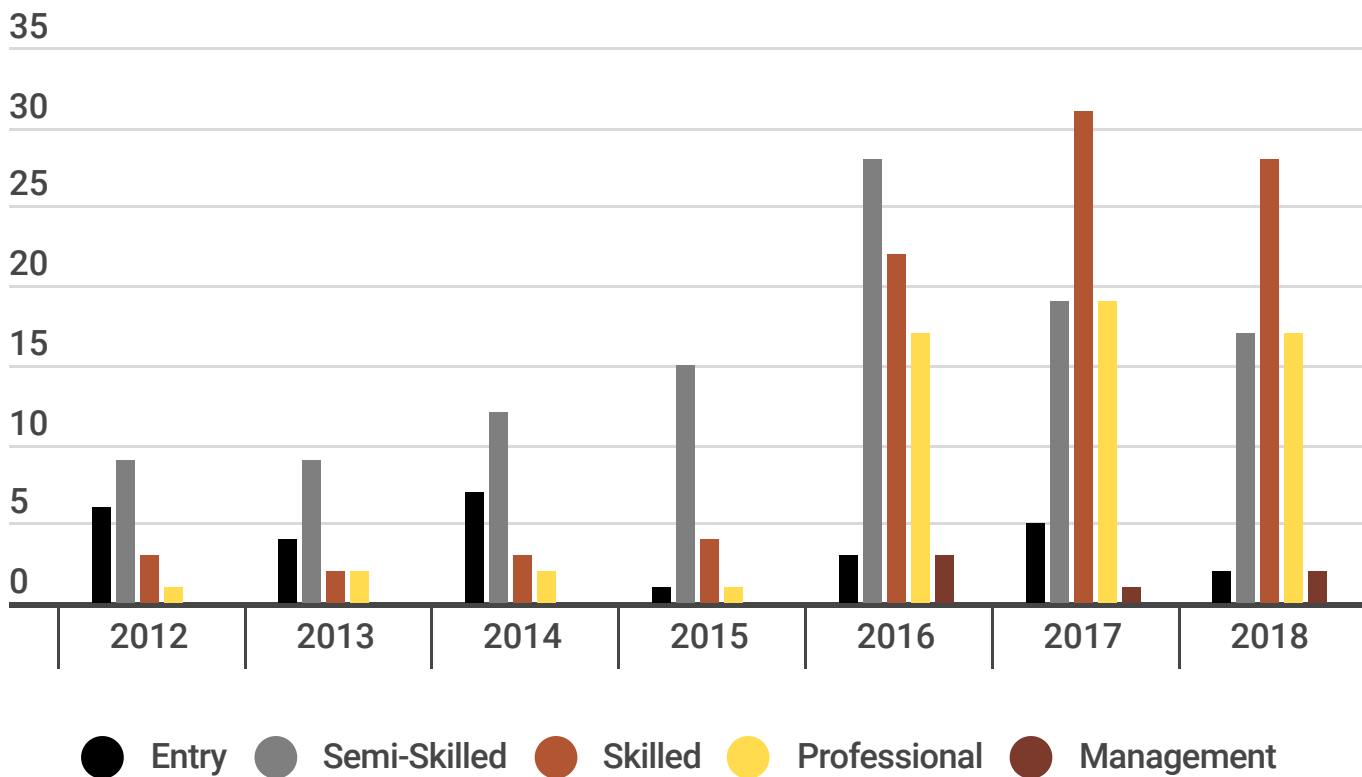
This indicator measures employment by Minto Mine according to entry level, semi-skilled, skilled, professional and management job categories. Minto Mine's employment by group and job category for the period 2012 – 2018 are provided below.

Figure 4-44. Minto employment of SFN and job category: 2012–2018



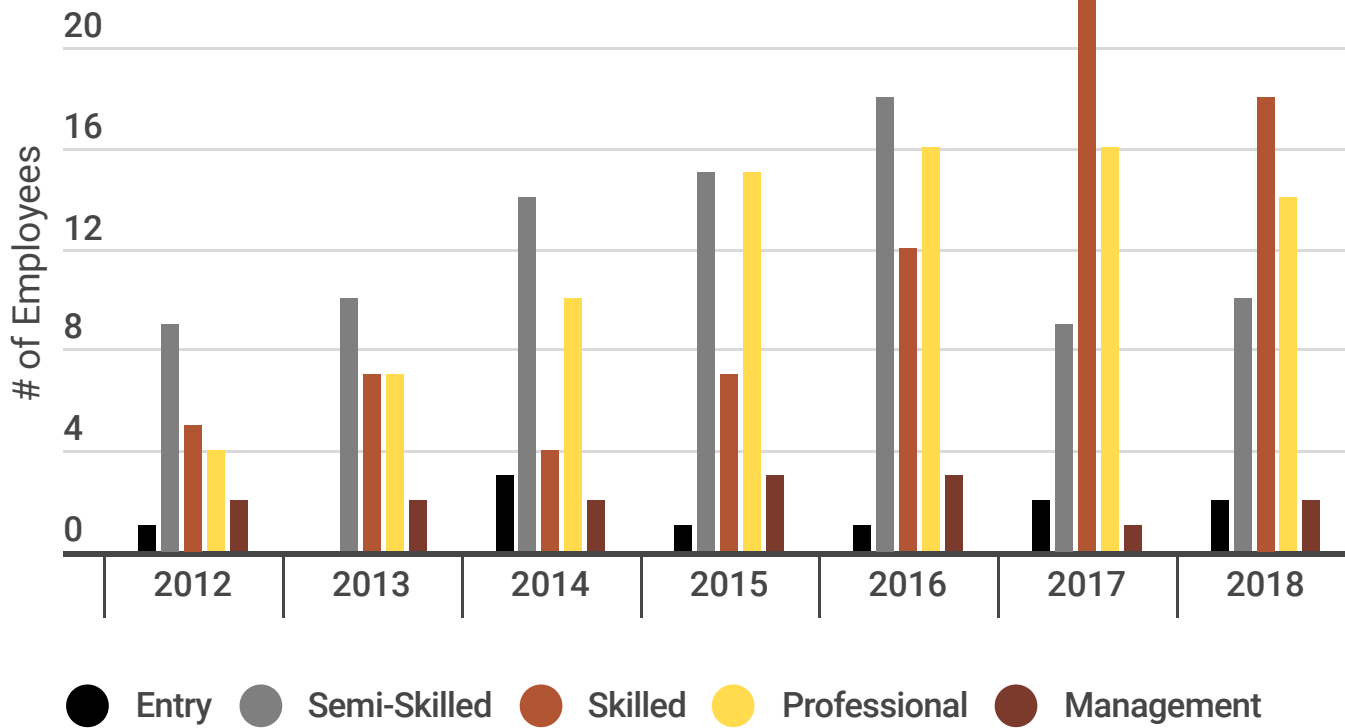
Source: Minto Explorations Ltd.

Figure 4-45. Minto employment of Other FNs and job category: 2012–2018



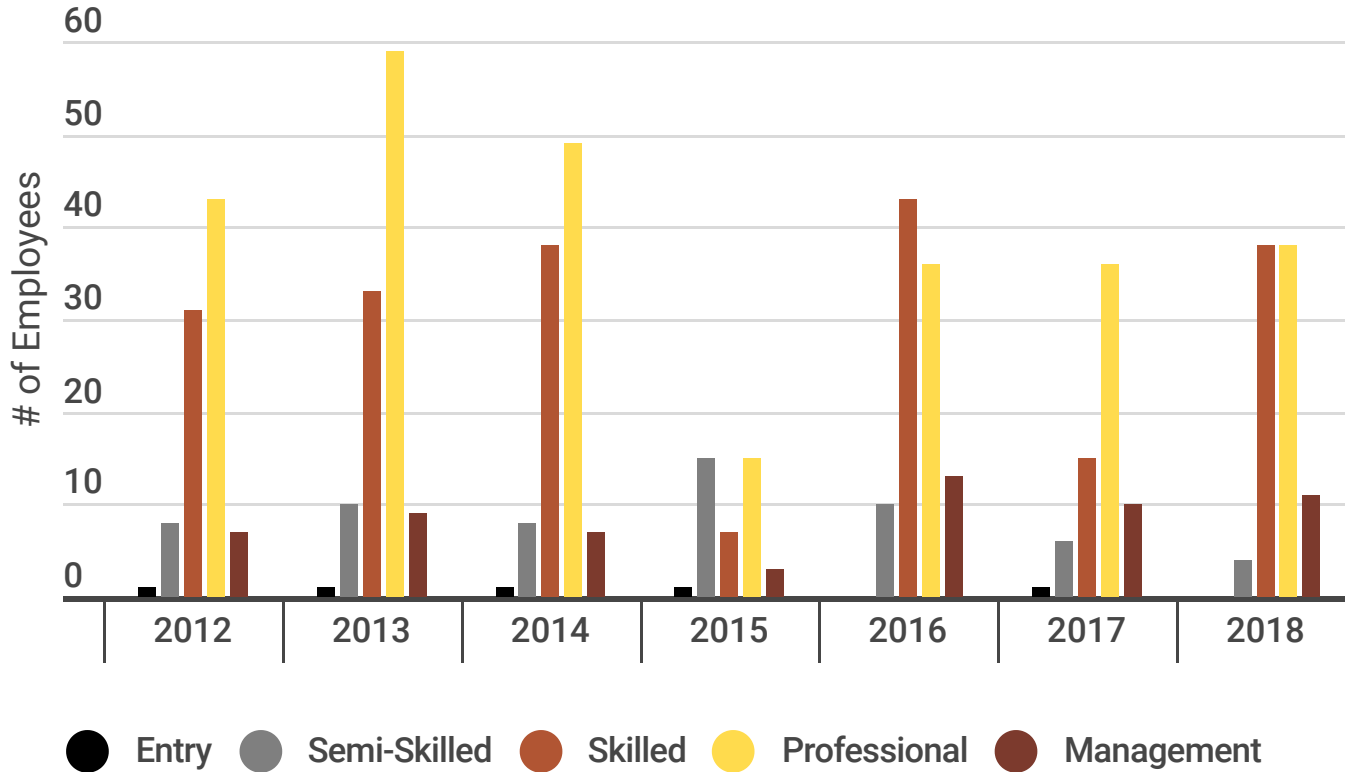
Source: Minto Explorations Ltd.

Figure 4-46. Minto employment of Yukoners (non-FNs) by job category: 2012–2018



Source: Minto Explorations Ltd.

Figure 4-47. Minto employment of Other Canadians by job category: 2012–2018



Source: Minto Explorations Ltd.

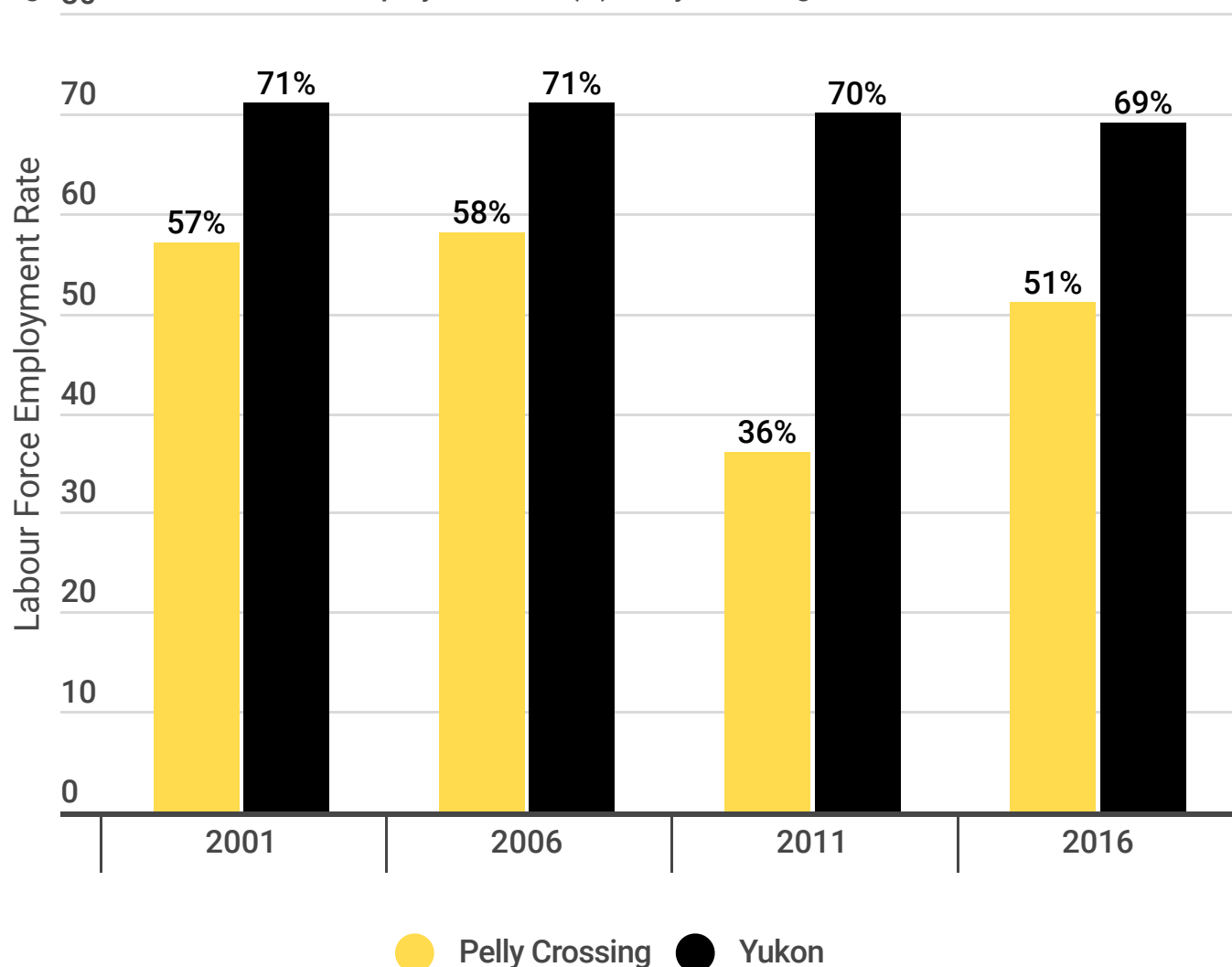
Notes on Figures 4-44 through 4-47:

- SFN and OFN employees are primarily in entry-level and semi-skilled positions. There are professional personnel and in 2017, a management level position was added.
- Yukon non-First Nations employees are represented in all categories of employment.
- Skilled, professional and management job categories are primarily held by employees from outside Yukon. This is likely arising from the limited resources available in Yukon.

Indicator #28 Employment rate

The employment rate is the percentage of the labour force that is employed. The labour force is defined as those aged 15 years and over who are either working or actively looking for work. Figure 4-48 compares the employment rates for Pelly Crossing to the Yukon rates for the Census years 2001, 2006 and 2016 and the National Household Survey year of 2011.

Figure 4-48. Labour force employment rate (%), Pelly Crossing and Yukon: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Government of Yukon, Census 2016 Labour Force Participation 2016

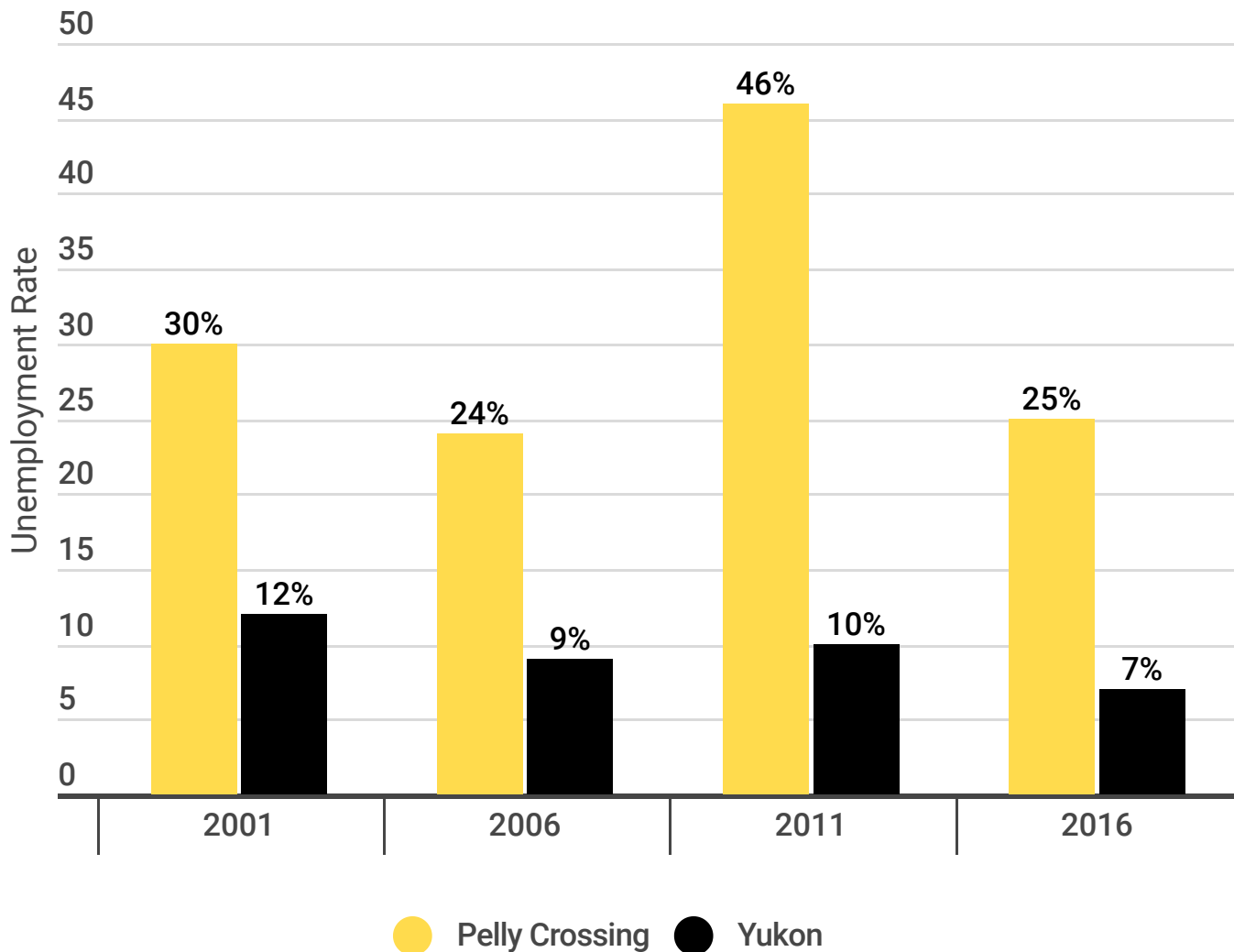
Notes on Figures 4-48:

- The Yukon employment rate has remained relatively similar between 2011 and 2016.
- The Pelly Crossing employment rate in 2016 was back to levels seen in 2001 and 2006 indicating that the 2011 value may have been inaccurate as a result of data quality issues in the 2011 survey.

Indicator #29 Unemployment rate

The unemployment rate is the percentage of the labour force that is not employed but is actively looking for work. Figure 4-49 compares the unemployment rates for Pelly Crossing to the Yukon rates for the Census years 2001, 2006 and 2016 and the National Household Survey year of 2011.

Figure 4-49. Labour force unemployment rate (%), Pelly Crossing and Yukon: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Government of Yukon, Census 2016 Labour Force Participation 2016

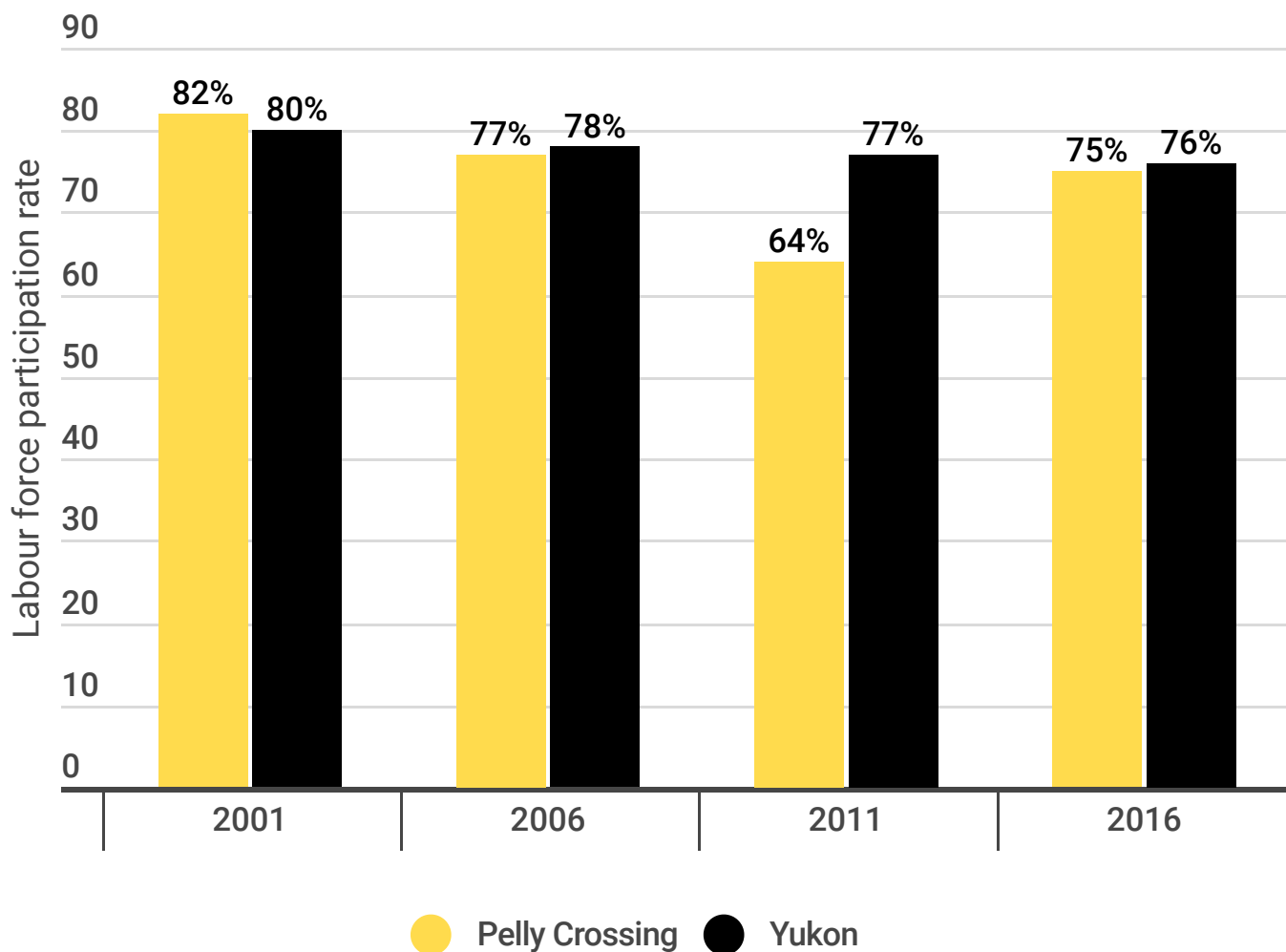
Notes on Figure 4-49:

- The unemployment rate in 2016 was back to levels seen in 2001 and 2006 as per the data found.
- Yukon unemployment rate was at its lowest value in 2016.

Indicator #30 Participation rate

The labour force participation rate is defined as the proportion of the population aged 15 years and over who are either employed or are unemployed but actively looking for work. These people make up the labour force. Figure 4-50 compares the labour force participation rates for Pelly Crossing to the Yukon rates in 2001, 2006 and 2016 Census and the 2011 National Household Survey.

Figure 4-50. Labour force participation rate (%), Pelly Crossing and Yukon: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Government of Yukon, Census 2016 Labour Force Participation 2016

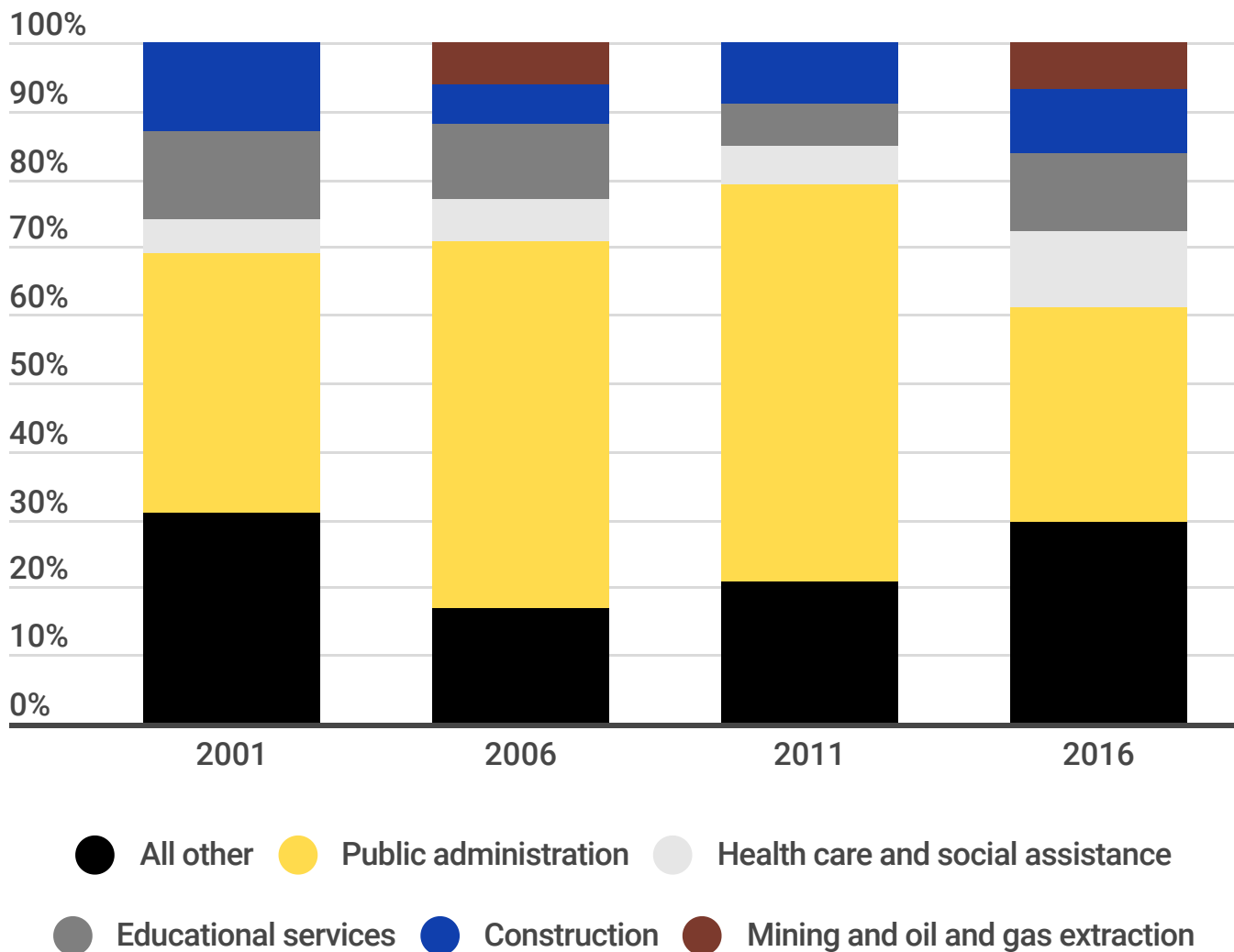
Note on Figure 4-50:

- The participation rate in 2016 was back to levels seen in 2001 and 2006. Pelly Crossing's participation rate is within 1 or 2% of Yukon's rate except in 2011.

Indicator #32 Employment by sector

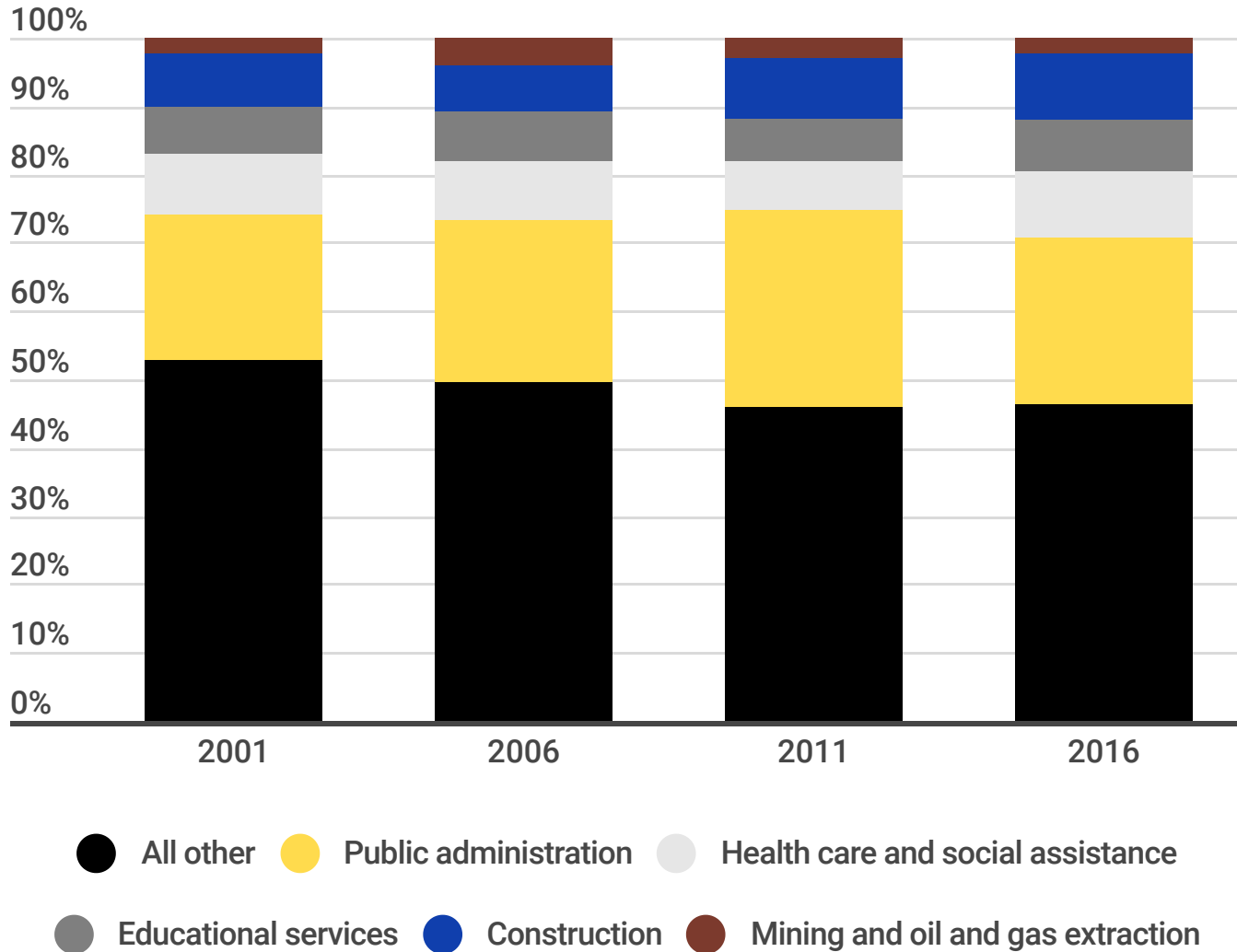
This indicator tracks employment preferences and capacity within the overall level of economic participation of the community. Figure 4-53 shows the employment by selected industries for Pelly Crossing and Yukon, as found by the 2001, 2006 and 2016 Census and the 2011 National Household Survey.

Figure 4-53a. Percentage of the active labour force in selected industries, Pelly Crossing: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Government of Yukon, Census 2016 Labour Force by Industry

Figure 4-53b. Percentage of the active labour force in selected industries, Yukon: 2001, 2006, 2011 and 2016



Source: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Government of Yukon, Census 2016 Labour Force by Industry

Notes on Figure 4-53a & 4-53b:

- Public administration is the single largest employer for Yukon as a whole. It is especially relevant in Pelly Crossing, where SFN, as a self-governing First Nation, is a major employer.
- Labour force participation in the mining sector in Pelly Crossing would be predicted to coincide with Minto's operations and their activity levels; this does not appear to be the case with the available Census data (e.g. 0% in 2011). Given that 2006 and 2016 Census data indicate 6 or 7% participation in mining, it is likely that the 2011 data is inaccurate.

4.7 Business

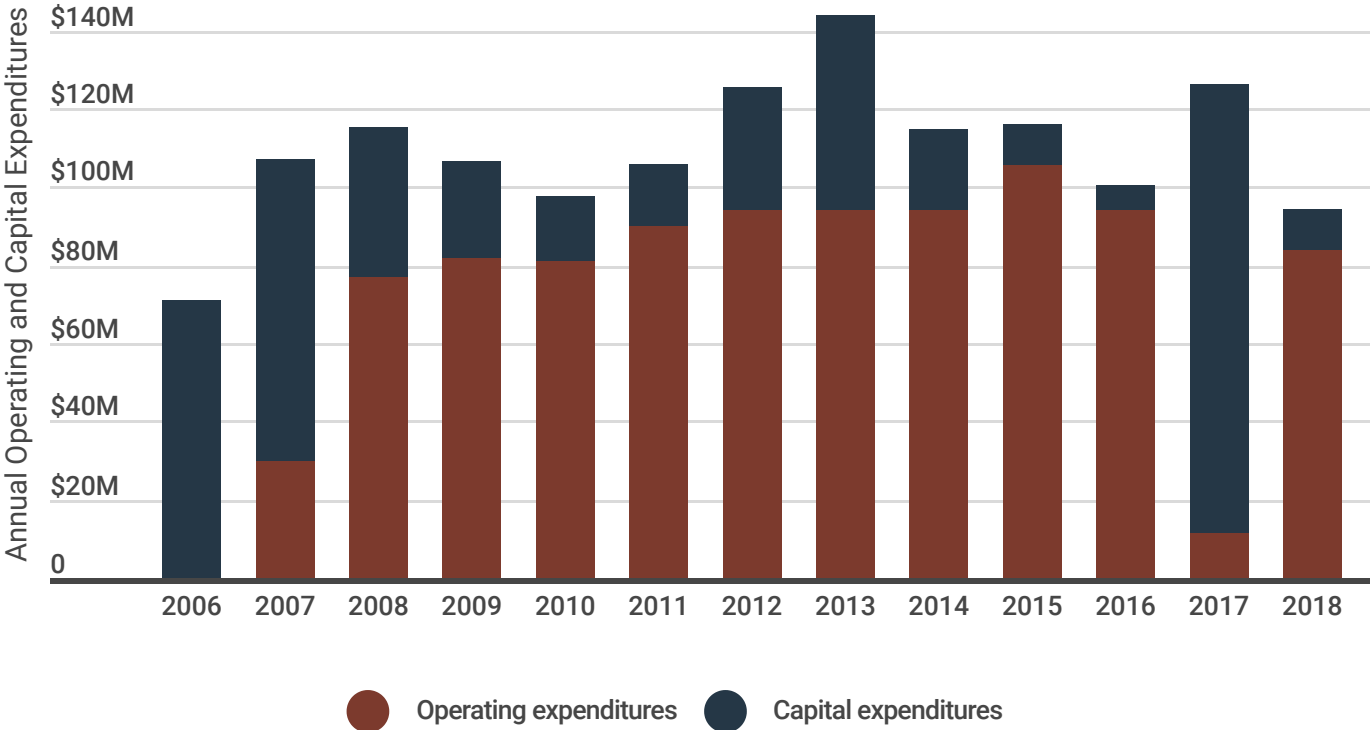
This section presents the available data for Indicator #33 (Minto Mine operations and capital expenditures by group); Indicator #34 (Minto annual and cumulative capital and operations expenditures by group); Indicator #35 (Minto spending on Yukon vendors); Indicator #36 (Minto royalty payments); Indicator #37 (Minto property tax payments and other fees). The safety statistics for Indicator #38 (Minto and contractors' safety statistics) are presented in Indicator #10.

As part of Minto and SFN's cooperation agreement, the company is required to provide preferred opportunity notification to SFN to negotiate and potentially be awarded a contract to satisfy the requirement. SFN has developed partnerships with a number of Minto's vendors; Minto is not privy to the details of those financial benefits. Therefore, this section does not present expenditures that result from those partnerships.

Indicator #33 Minto Operating and Capital Expenditures

This indicator helps measure direct expenditure impacts. Minto could not provide these data broken out by group, but annual total capital and operating expenditures are shown in Figure 4-54.

Figure 4-54. Minto Mine Operating and Capital Expenditures (\$): 2006–2018



Source: Minto Explorations Ltd.

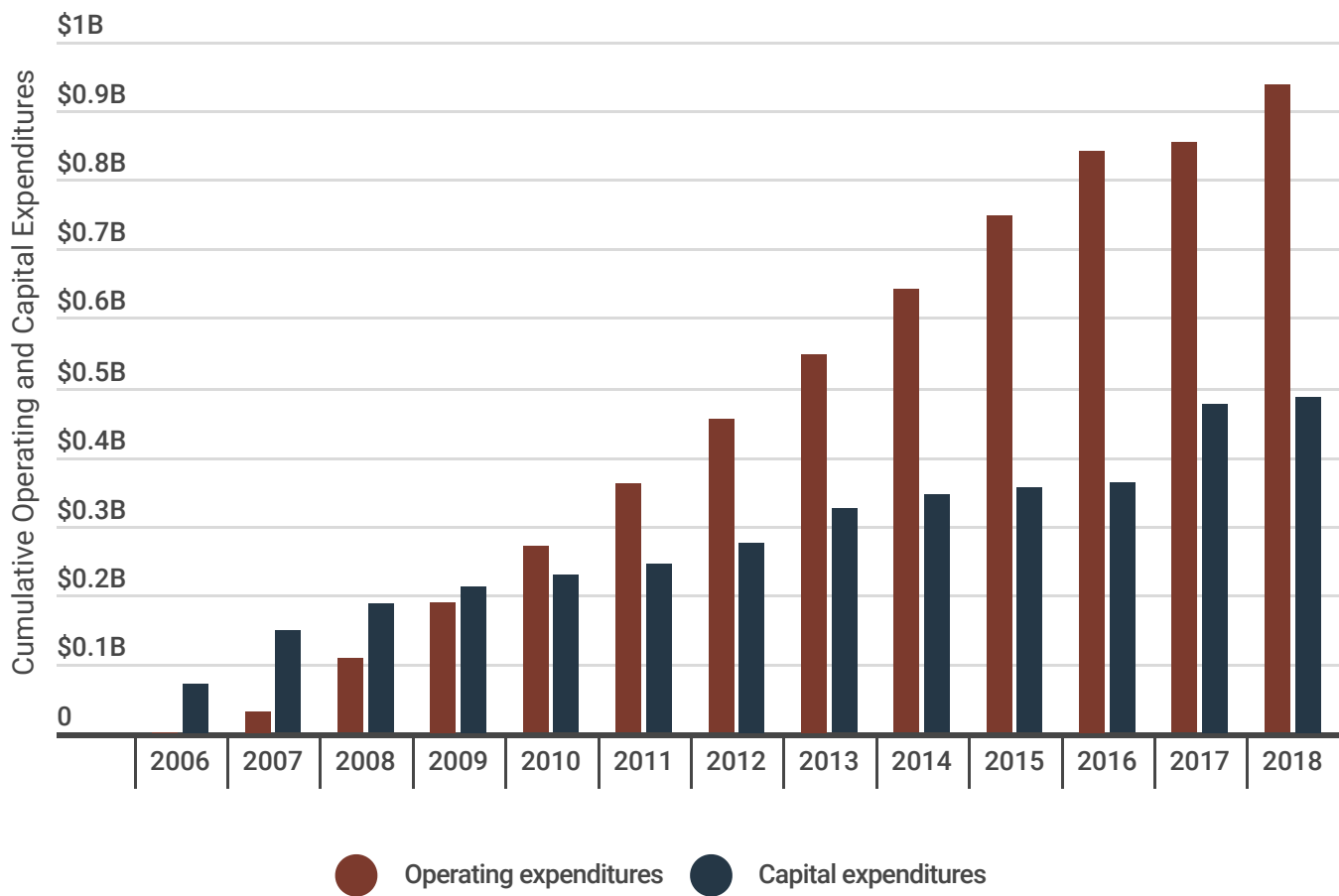
Notes on Figure 4-54:

- Capital expenditures were at similar spending levels in both 2016 and 2018 whereas in 2017, there was a significant increase. However, in 2017, operating expenses were at their lowest level since 2006. The focus on capital expenditures was related to the construction of a new pit, secondary egress and other underground structures related to Phase V/VI development. Overall, 2016 and 2018 total expenditures were amongst the lowest levels since the mine commenced.

Indicator #34 Minto Annual and Cumulative Capital and Operations Expenditures

This indicator helps measure direct expenditure impacts. Cumulative totals of capital and operating expenditures for the Minto Mine (including payments to all contractors by Minto) are shown in Figure 4-55.

Figure 4-55. Minto Mine cumulative operating and capital expenses (\$): 2006–2018



Source: Minto Explorations Ltd.

Notes on Figure 4-55:

- Cumulative operating expenses have increased to \$937 million in 2018.
- Combined cumulative capital and operating expenses between 2006 and 2018 was over \$1.4 billion.

Indicator #35 Minto spending on Yukon vendors

This indicator measures direct payments to Yukon businesses.

Figure 4-56. Minto Mine payments to business vendors (\$), Pelly Crossing and Yukon: 2013 – 2018

	Pelly Crossing	Other Yukon	Total Yukon
2013	\$66,391	\$74,942,535	\$75,008,926
2014	\$34,563	\$55,763,720	\$55,798,283
2015	No Data	No Data	\$36,144,688
2016	\$4,797,462	\$52,136,359	\$56,933,821
2017	\$4,243,527	\$53,720,992	\$57,964,519
2018	\$1,867,083	\$36,942,913	\$38,809,996
Total	\$11,009,026	\$273,506,519	\$320,660,233

Source: Minto Explorations Ltd.

Notes on Figure 4-56:

- There are a limited number of vendors available from Pelly Crossing. A total of 19 different vendors were used from 2016 to 2018. It should be noted that some SFN business ventures are based in Whitehorse so are not counted in Pelly Crossing spend (e.g. Selkirk Development Corporation).
- In 2016, 9% of Yukon's total spend was in Pelly Crossing compared to 5% in 2018.
- The percentage of total spend in the Yukon (compared to total expenditures) ranged from a low of 37% in 2018 to 48% in 2016

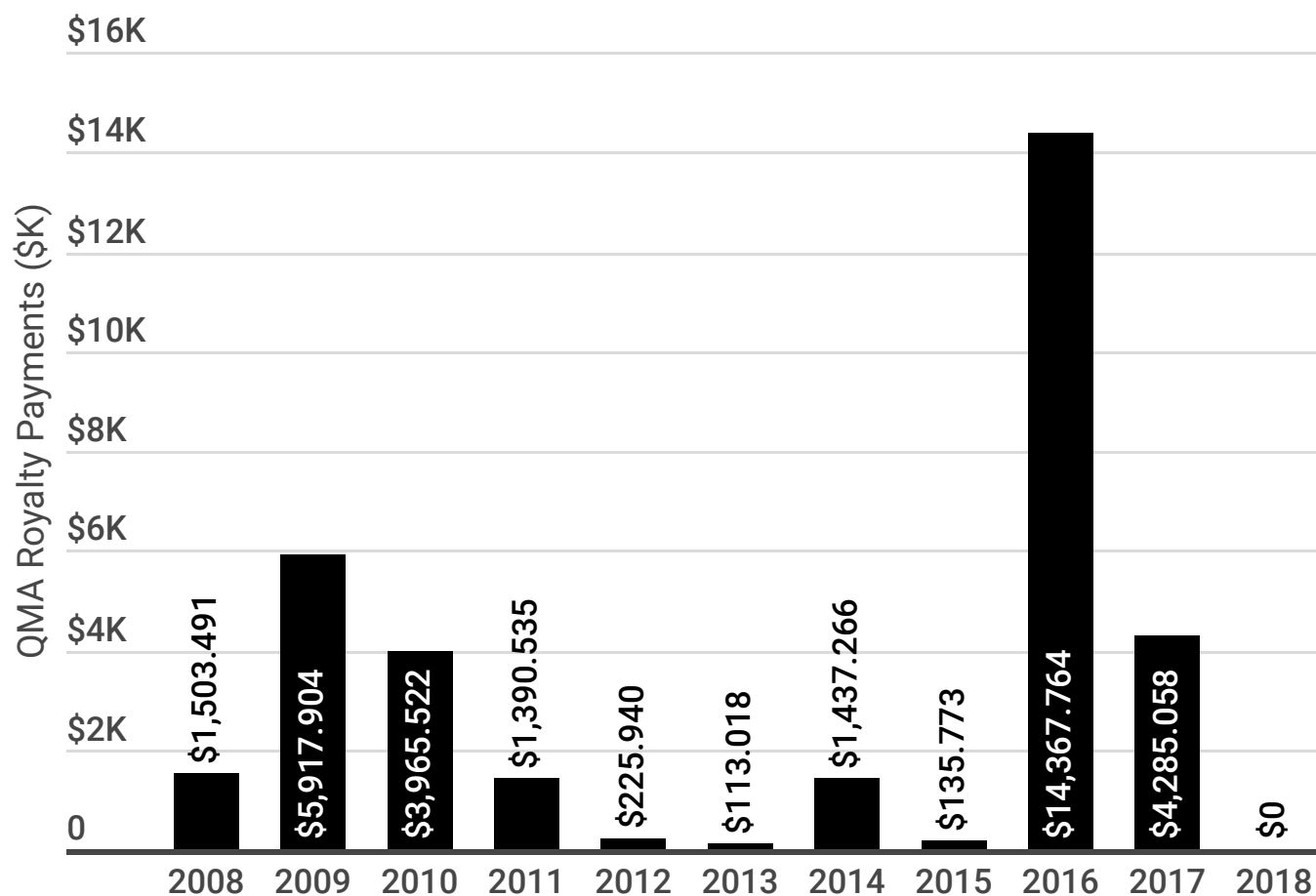
Indicator #36 Minto Royalty Payments

Royalty payments are a significant source of revenue to governments. This is especially true for SFN, which receives the mineral royalties paid by Minto under the Quartz Mining Act Royalty Regulation since the mine is located on Category A Settlement Land (where the First Nation holds both surface and subsurface rights). The Government of Yukon administers the royalty on behalf of SFN and transfers the royalty payments directly to SFN.

The Quartz Mining Act Royalty Regulation provides for a net profit-based, escalating-scale royalty regime in Yukon. The royalty is based on annual mineral production and sales. There is no royalty on the first \$10,000 of mine output; after \$10,000, the royalty rate escalates with the amount of mine output up to a maximum of 12% royalty on output greater than \$35 million. The value of the output of a mine is determined by subtracting eligible expenses and allowances, as defined in the Regulation, from the value of minerals produced by a mine during the calendar year. This can result in variability in payments depending on a mine’s production volume, profitability and the amount of eligible expenses the mine operator can deduct against royalties in a given year. SFN also receives a net smelter return as part of the Cooperation Agreement with Minto.

Figure 4-57 shows royalty payments from 2008 to 2018 under the Quartz Mining Act Royalty Regulation and Figure 4-58, Minto’s net smelter return payments from 2009 to 2018.

Figure 4-57. Quartz Mining Act (QMA) Royalty Payments, Minto Mine (\$): 2008-2018

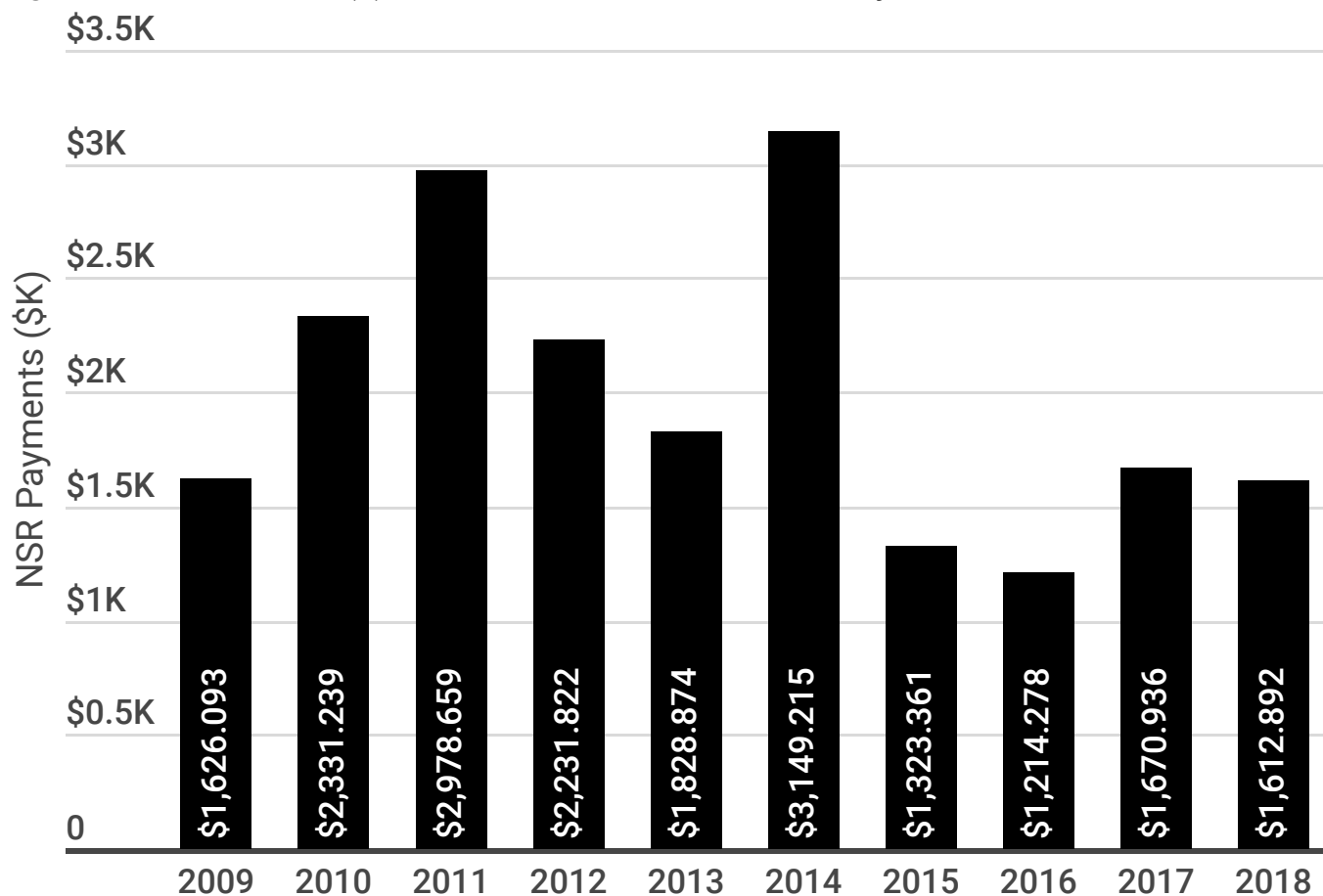


Source: Government of Yukon and Minto Exploration Ltd.

Notes on Figure 4-57:

- The total QMA royalty paid from 2016 to 2018 was \$18,652,822. No royalty was paid in 2018 as the mine entered temporary closure resulting in the allowable costs and deductions exceeding the value of the mine output.

Figure 4-58. Minto Mine (\$): 2009-2018 Net Smelter Return Payments



Source: Minto Explorations Ltd.

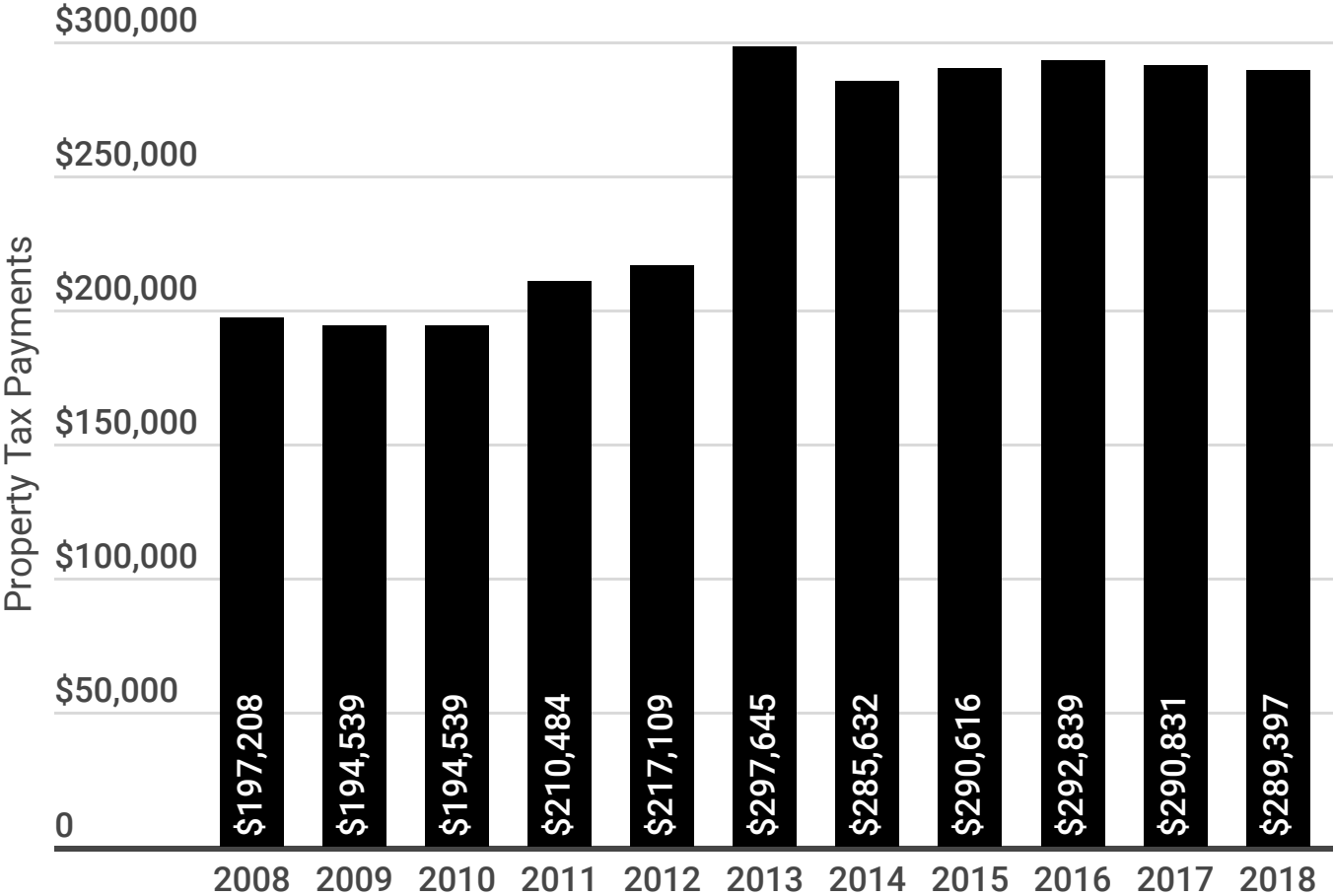
Notes on Figure 4-58:

- From 2016 to 2018 the total of net smelter return payments to SFN was \$4,498,106.

Indicator #37 Minto Property Tax Payments and Other Fees

Minto pays property taxes to the Government of Yukon, forming one part of government revenue gained from the operation. Figure 4-59 shows the annual property taxes paid by Minto to the Government of Yukon.

Figure 4-59. Property Taxes Paid by the Minto Mine (\$): 2008-2018



Source: Minto Explorations Ltd.

Notes on Figure 4-59:

- Between 2016 and 2018, a total of \$873,067 in property taxes has been paid to the Government of Yukon.

4.8 Selkirk First Nation Traditional Economy

Traditional economic activities – hunting, fishing, gathering and trapping – are an important part of social, economic and cultural life for SFN citizens. The SFN traditional economy is an integral component of the broader SFN mixed economy in which SFN citizens participate on a cash and non-cash basis. The SFN traditional economy has strong household following within the community.

The traditional foods produced are essential for SFN food security and to reduce or mitigate the impacts of lower cash income and wage employment levels in Pelly Crossing.

In 2017, SFN completed a traditional use study on its Traditional Territory including the area where Minto mine is located. It considered past and present traditional use of lands and waters in SFN Traditional Territory and incorporated information generated from the 2015 SFN Household Survey, the 2015 Annual Report as well as extensive historic and contemporary information regarding use and occupancy of traditional lands. SFN has also completed the SFN Traditional Use Study Atlas 2018. Relevant traditional use results for SFN's entire Traditional Territory will be featured in upcoming SEMP.

Published data on these activities in Yukon and elsewhere in northern Canada are at best sparse and more usually nonexistent.

4.9 Employment and Workforce Development

This Valued Condition uses three indicators to describe and measure commitments to employment and labour force development as a function of mine operations and, eventually, closure: Indicators #42, #43 and #44 (Skills and Labour Force Development Initiatives).

Indicator #42 High-level description of initiatives to enhance skills and labour force development

Since 2007, Minto has expanded its training to enhance the skills of its workforce. Much of this skills training is transferable to other mining operations and more broadly to other industries. Safety training ranges from working with hazardous materials and working in confined spaces to Red Cross first aid courses and First Line Supervisor Certification by the Yukon Workers' Compensation Health and Safety Board. The Emergency Response Team collectively trains regularly to provide emergency response and primary care. Minto supports development of a more advanced local labour force through a combination of on-the-job training and mentoring, sponsoring apprenticeships, pre-apprenticeships and other educational initiatives.

Minto has worked with Centre for Northern Innovation in Mining (CNIM) on a number of programs that have led directly to increased employment of locals from Yukon. Two specific initiatives include interviewing candidates and helping recruitment for the Introduction to Underground Mining course and providing a site tour and presentations on recruitment for the Workplace Readiness Course that was run in Pelly Crossing.

Indicator #43 Detailed description of initiatives to enhance skills and labour force development

Minto has undertaken several initiatives to enhance skills and labour force development. These initiatives include formal and informal approaches that are suited to meet a range of needs and that reflect the requirements of a local work force. In the absence of formal tracking and agreements, management reviews various initiatives, receives input from the community and from the SFN Minto Employment Liaison and uses management discretion to make decisions regarding skill development.

Minto's Human Resources Department worked with the SFN Minto Employment Liaison, Pelly Crossing on Cooperation Agreement matters pertaining to preferential hiring for SFN citizens, Pelly Crossing residents and Northern Tutchone citizens.

Minto worked with and funded the SFN Minto Employment Liaison position through the Selkirk Development Corporation. All position vacancies were sent to the SFN Minto Employment Liaison, who advertises them in the community and sends resumes and applications to Minto Human Resources and hiring departments of contractors. Minto and its contractors conduct job fairs in the community throughout the year.

Minto works with Yukon University and local schools to facilitate mine site tours for students. Minto has various partnerships with Yukon University to support the Underground Mine Training, Introduction to Mining, Surface Mine Training and First Line Supervisor training programs.

SFN and OFN specific training included the following in 2016 to 2018:

1. Mill Competency Program

Minto initiated a Mill Operator Competency Program in 2016 that targets the entry-level mill operators to allow them to "train up" in the mill through a combination of on-the-job training, signed-off verified hours and on-line training modules. This program was continued in 2017 and 2018.

2. Pre-Apprenticeship training

Minto sponsored a SFN student in completing pre-apprenticeship study requirements in partnership with Yukon University (LD Mechanic).

3. Apprenticeship training

Minto sponsored a SFN student in apprenticeship training (Warehouse Partsperson). Additionally, Minto sponsored an Northern Tutchone citizen within the Millwright Apprenticeship program. This employee has now successfully completed his program and is a Certified Red Seal Journeyperson Millwright.

4. SFN Summer Student

In 2017, Minto employed an SFN summer student over a 6-week period. During that time, the student developed a number of transferable skills by working with Site Services, Environmental and Warehouse Departments.

5. Environmental Monitor-in-Training

In 2017 and 2018, Minto offered an Environmental Monitor-in-Training program to local SFN citizens. Trainees learned specific skills, such as how to inspect and coordinate site waste management, monitor wildlife activity and determent on site, participate in small scale reclamation activities, proper chain-of-command for water and soil samples leaving site for testing and assist and conduct routine environmental monitoring activities according to Environmental Monitoring Plan and established protocols. In 2017, the training went very well and Minto was able to provide a candidate with full-time employment over a 1-year term.

6. In 2018, SFN leadership and Minto agreed to convene a round table focused on SFN employment and opportunities. Outcomes will be included in upcoming SEMP.

Indicator #44 Description of partnership arrangements to enhance skills and labour force development

Although Minto has no formal partnerships in place to enhance skills and the labour force, it is working with other organizations (as described in Indicator #43) to enhance skills and employment. These organizations include SFN, YMTA and Yukon University.

4.10 Education and Training

In this report the Valued Condition of education and training is described by Indicator #48 (School absenteeism).

Indicator #48 School absenteeism

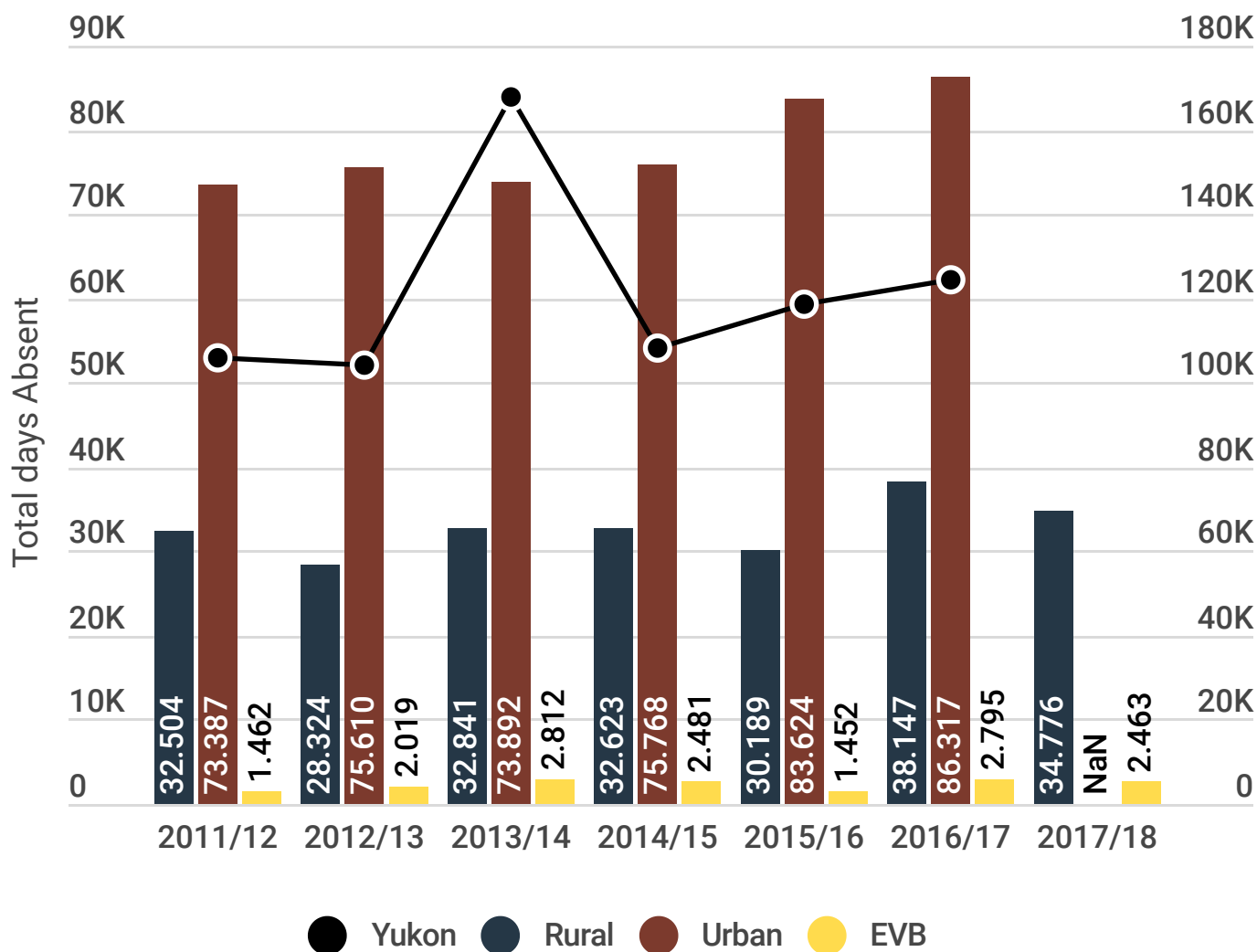
School absenteeism rates are an indicator of the value placed on formal education by individuals and the community. Currently, school absenteeism data available needs further clarification and requests have been made for this requirement.

Figure 4-67b compares the total days absent for the Eliza Van Bibber (EVB) School in Pelly Crossing with the rate for Yukon as a whole, rural and urban schools.



Eliza Van Bibber School. Credit: Selkirk First Nation

Figure 4-67b. Total days absent by location, 2011-12 to 2017-18



Source: Yukon Department of Education.

Note on Figure 4-67b:

- Eliza Van Bibber School (EVB at Pelly Crossing) fluctuated from 1,452 to 2,812 days absent per year with lows in 2011/12 and 2015/16 and highs in 2013/2014 and 2016/17.
- The rural data also fluctuates with no clear trend. There was commonality that 2015/16 was a low for rural schools and 2016-17 had a high number of days absent.
- The 2017-18 values were only students enrolled at rural and EVB respectively at the end of May. This is the Department of Education recommended date. Some students may fluctuate between schools; therefore, the data only pertains to days relevant for rural and EVB respectively.

5. Recommendations



Credit: Minto Explorations Ltd.

Based on analysis of the information presented in this report, the TPWG recommends several actions to achieve the following:

- enhance the overall management of positive and negative socio-economic effects that may result from the mine; and
- improve the collection of information and reporting to enhance the monitoring program.

Recommendations are outlined below with respect to both Mine Management and the Technical Program. The status of the 2015 Recommendations are reported on first, followed by new Recommendations for this report.

5.1 Status of 2015 Recommendations

5.1.1 Mine Management

1. Roundtable Discussions: The need for new and retrofitted housing in Pelly Crossing for SFN citizens remains a high priority for SFN. SFN continues to support dialogue and solutions to address both housing and better representation of SFN citizens in skilled positions at the Minto Mine. It is recommended that SFN with input from the TPWG develop terms of reference for roundtable or workshop discussions associated with a. housing and b. barriers to employment for SFN citizens. [Lead: SFN (for housing) and SFN and Minto (for barriers to employment)]

2. An additional roundtable or workshop discussion could be beneficial for SFN to consider long term, sustainable legacy benefits arising from the Minto Mine. [Lead: SFN and Minto] Roundtable discussion could address some or all of the following indicators under Living Conditions: Sustainability and Legacy: displacement of costs and transfer of benefits to future generations, legacy socio-economic benefits, perceived availability of resources to meet the needs of future generation and perceived state of the environment to maintain socio-ecological systems. Timing for this discussion is relevant as the mine currently anticipates moving to the active closure phase by 2025.

3. Yukon Labour Force Participation – It is recommended that the Government of Yukon, working with the appropriate partners, identify measures that would enhance the participation of Yukon’s resident workforce in all positions at the Minto Mine. [Lead: Government of Yukon]

4. Training – Approach CNIM to discuss potential for data collection going forward on mine training. It would be helpful to obtain information from former program graduates. [Lead: Government of Yukon]

Reporting Progress on Mine Management Recommendations

In considering Mine Management Recommendations 1 and 2 associated with Roundtable Discussions set out in the Minto Mine SEMP Annual Report 2015 (released during 2018), SFN Leadership noted a round table dialogue between SFN and Minto about barriers to employment would be timely. Terms of reference were developed by SFN, in concert with Minto Explorations Ltd. during 2018. It was agreed the dialogue would follow in early 2019. However, Minto Mine went into temporary closure in October 2018 resulting in limited engagement until the property was sold and the mine re-started in September 2019. As a result of the temporary closure and limited capacity on the part of SFN, there was limited progress on the other roundtables. Reporting progress will occur in the Minto Mine 2019 AR.

5.1.2 Technical Program

The following recommendations address opportunities to streamline the reporting process now that the report style and content requirements are established.

1. Combine the 2016 and 2017 Annual Reports into one document. This will re-align the reporting and data periods and also take advantage of the timing of the release of the 2016 NHS which was not available until late in 2017.

2. Reduce data content of future annual reports to only include indicators where new information and data are available for the reporting year. The current year data should be combined with associated cumulative (historic) data from previous years to document any applicable trends.

a) Year-over-year this will typically provide Minto-mine specific data and other indicators for which qualitative information is provided.

b) Years in which National Household Survey data and SFN household survey data are available will result in a more comprehensive treatment of the full set of indicators. Report years in which NHS and SFN survey data are not included will reference the reports where that data is included.

Reporting Progress on Technical Program Recommendations

As was recommended, the 2016 to 2017 Annual Reports were combined into one document (this report). Due to timing, it made sense to further combine the reports with the 2018 Annual Report. This Report only included content where there was new information or data available. It is anticipated that the 2020 Annual Report (or one shortly thereafter due to COVID pandemic delays) will include the full set of Indicators and thus be comparable to the 2015 Annual Report.

5.2 2016 to 2018 Annual Report Recommendations

5.2.1 Mine Management

1. Continue to work with CNIM and Yukon University (formerly Yukon College) on training programs. Engage in discussions with CNIM/Yukon University on the results of those training programs and how Minto can improve the effectiveness of those programs. Report on the number of employees or contractors who have taken these programs and where possible indicate by SFN, other FNs, and Yukoners.
2. Continue to engage in discussions with SFN and Selkirk Development Corporation on economic opportunities for SFN associated with Minto Mine or mining in Yukon. It will be beneficial for SFN and Minto to consider long term sustainability legacy benefits in coming years.
3. a. Discuss with Minto, and potentially representatives from Yukon University, relevant housing-related programs. Housing conditions for SFN citizens, especially in Pelly Crossing remain a concern.
b. Pending progress between Minto and SFN on barriers to employment for SFN citizens at Minto Mine, a bilateral round table or expanded round table including other companies and service providers might be considered. It would also be useful to seek information from either Yukon University or service providers regarding success rates for SFN citizens and Northern Tutchone citizens graduating from training programs and securing employment.

5.2.2 Technical Program

1. Transition future annual reports to a digital format. Evaluate the potential of having contractors and Minto report on employment indicators at regular intervals. This would also enable seasonal differences in workforce to be accounted for in future reports.
2. Expand the reporting requirement to all contractors with significant personnel on site. All contractors on site should be aware of the reporting requirements and where possible the requirement should be in contracts.
3. Review the SEMP 2015 and 2016 - 2018 Annual Reports to determine indicators validity after a 5-year term of them being in use. TPWG to ensure there is agreement on the approach.
4. Review format of overall report and decide on new suggested changes, i.e. revised Indicators based on new data being available. TPWG to ensure there is agreement on the approach.
5. Establish a sub-group to determine how to transition the SEMP to an online format. Evaluate the potential for the 2019 SEMP to be a pilot version of an online report.

6. Evaluate the impacts of the temporary closure and COVID 19 pandemic in a separate section of the SEMP as unique events with significant impacts. TPWG to determine framework for the section dedicated to the impacts of temporary closure for the upcoming SEMP Annual Report 2019.
7. Conduct an evaluation of SEMP (e.g. lessons learned) that would be shared with other interested parties. This evaluation would be after the next report that contains the entire suite of Indicators.
8. Discuss the possibilities and options on the potential release of a version of the Minto Mine SEMP framework (initially signed 2014 and updated in 2018) to interested parties. Review the possibility of making it available to a more public domain given increasing interest in this type of monitoring program, added to the YESAB ongoing and emerging requirements for Socio-economic monitoring programs in Yukon, beyond SFN traditional territory.



Minto Mine. Credit: Government of Yukon

Footnotes

1 YESAA 2010-0198 Minto Mine Expansion Phase IV, the Government of Yukon Decision Document 2010-0198-141-1 <http://www.yesabregistry.ca/wfm/lamps/yesab/lowspeed/projectdetails.jsp;time=1518649154443>.

2 YESAA 2010-0198 Minto Mine Expansion Phase IV, Selkirk First Nation Decision Document 2010-0198-143-1 <http://www.yesabregistry.ca/wfm/lamps/yesab/lowspeed/projectdetails.jsp;time=1518649154443>.

3 Minto Mine Socio-economic Monitoring Program: Components, Information and Program Requirements www.emr.gov.yk.ca/mining/pdf/mml_minto_socioeconomic_monitoring_program.pdf.

4 A SFN citizen is person recognized as such under the Selkirk First Nation Constitution – Amendment 2013.

5 In this report the term “Valued Condition” is equivalent to the term “valued socio-economic component” as used by the YESAB. Valued socio-economic components, or VSECs, are defined by the YESAB as those parts of the socio-economic fabric that are valued because of their importance to a community, specifically because of their: integral connection to, or reflection of, the socio-economic system; commercial or economic value; and/or, their role in maintaining quality of life in a community. Some VSECs are specific to a particular community or interest, but many overlap among communities and interests (Source: Yukon Environmental and Socio-economic Assessment Board. 2006. Guide to Socio-economic Effects Assessments, p.36.) A more recent discussion can be found online at www.eao.gov.bc.ca/pdf/EAO_Valued_Components_Guideline_2013_09_09.pdf.

6 These are identified in the Minto Mine Socio-Economic Monitoring Program: Components, Information and Program Requirements – As Amended 2018.

7 YESAA 2013-0100 Minto Mine Expansion Phase V/VI, July 5, 2013.

8 See Government of Northwest Territories. Communities and Diamonds. www.assembly.gov.nt.ca/sites/default/files/td227-175.pdf.

9 See www.eco.gov.yk.ca/stats/pdf/MigrationPatterns2010.pdf.

Sources

Community Stability & Well-being Indicators

Population of SFN Figures - Selkirk First Nation Administration.

Duration of Residency Figure - Census 2001, Cumulative Profile; Statistics Canada; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Cyan_PR_CD_CSD_DA; 2016 Census Catalogue no. 98-316-X2016001.

Net Migration Figure - Census 2001, Cumulative Profile; Statistics Canada; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Cyan_PR_CD_CSD_DA; 2016 Census Catalogue no. 98-316-X2016001; Yukon Bureau of Statistics Annual Reports, Health Care population statistics.

Crime Severity Figure: Statistics Canada CANSIM Table 252-0082 & Table: 35-10-0185-01; Government of Yukon Socio-Economic Web Portal.

Family Stability & Well-being Indicators

Family Structure (Lone Parents) Figure: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no.94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Government of Yukon Socio Economic Web Portal Census 2016.

Health Indicators:

Minto and Contractor Safety Figure: Minto Exploration Ltd.

Housing Indicators:

Housing Condition Figure - Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Government of Yukon Socio-Economic Web Portal Census 2016

Income and Income Distribution Indicators:

Minto and Contract Employment Figures: Minto Exploration Ltd.

Yukon and Pelly Crossing Household/Personal Income Figures: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Census Profile, 2016 Census.

SFN Citizen Sources of Income Figure: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Census Profile, 2016 Census.

Employment Indicators:

Minto and Contractor Employment Figures: Minto Exploration Ltd.

Yukon and Pelly Crossing Labour Force Figures: Statistics Canada 2001 Census Catalogue no. 95F0181XDB96001; 2006 Census Catalogue no. 94-578-XCB2006002; 2011 NHS Semi-custom profile NHS2011_Can_PR_CD_CSD_DA; Government of Yukon, Census 2016 Labour Force Participation 2016.

Business Indicators:

Minto Expenditure and Payment Figures: Minto Exploration Ltd.

Education and Training Indicators:

School Absenteeism: Yukon Department of Education.



Credit: Selkirk First Nation



Appendix 1 - Valued Conditions and Socio-economic Indicators

This appendix was adapted from Appendix A of the *Minto Mine Socio-economic Effects Monitoring Program: Program Elements and Information Requirements* (as amended in 2018). It lists all 65 of the Valued Conditions, indicators, and expected information sources for those indicators and the rationale for each indicator as developed by the Tri-Partite Working Group and amended by the Parties. 33 of 65 of the Indicators are addressed in this report. No new data or information are available for Indicators associated with the SFN Household Survey resulting in those Indicators not being included in this Report. Please note that Table A1-1 below has been updated for this Report (from the 2014 and 2015 versions). The numbered sequence of indicators in Appendix 1 has some gaps. Where appropriate, some indicators are applied to and measure more than a single Valued Condition.

Living Conditions	Valued Conditions	Indicators	Scale and Frequency	Data Source	Rationale
Population and Health	Community Stability and Well-being	#1 SFN citizens by residency	Pelly Crossing: annual Whitehorse/Yukon: 5 yr	Census SFN Household Survey	Reflects life choices affected by local and non-local conditions and proximity to Minto-related opportunities
		#3 Net migration	Pelly Crossing/Whitehorse/Yukon: Annual	YG Health	Affects institutional/family stability
	Health	#10 Minto & contractors safety statistics	Site-wide	Minto Mine	Work-related injury
Material Well-being	Income and Distribution	#16 Average employment income by residency	Pelly Crossing/Whitehorse/Yukon/Canada: Annual	Minto Mine	Direct income impacts
		#17 Average employment income by Minto & Contractors	Pelly Crossing/Whitehorse/Yukon/Canada: Annual	Minto Mine	Direct income impacts
		#18 Minto & contractors annual and cumulative total employee income by group	Pelly Crossing/Yukon/Canada: Annual	Minto Mine	Direct and cumulative income impacts
		#22 # of social assist cases	Pelly Crossing/Whitehorse/Yukon: Annual	SFN	Reflects dependency/self-reliance
	Employment	#23 Minto northern employment by group	Pelly Crossing/Yukon/Canada: Annual	Minto Mine	Direct employment impacts

		#24 Minto northern employment by residency	Pelly Crossing/Whitehorse/Yukon/Canada: Annual	Minto Mine	Direct employment impacts	
		#25 Employment by contractors	Pelly Crossing/Yukon/Canada: Annual	Minto Mine	Direct employment impacts	
		#26 Minto new hires for operations by group	SFN/Other FN/Yukon/Canada: Annual	Minto Mine	Direct employment impacts	
		#27 Minto employment by job category and group	Management (aboriginal (SFN; others), Yukon non-aboriginal, total Yukon, other Canadian, Total): Annual	Minto Mine	Direct employment impacts	
			Professional (aboriginal (SFN; others), Yukon non-aboriginal, total Yukon, other Canadian, Total): Annual	Minto Mine	Direct employment impacts	
			Skilled (aboriginal (SFN; others), Yukon non-aboriginal, total Yukon, other Canadian, Total): Annual	Minto Mine	Direct employment impacts	
			Semi-skilled (aboriginal (SFN; others), Yukon non-aboriginal, total Yukon, other Canadian, Total): Annual	Minto Mine	Direct employment impacts	
			Entry-level (aboriginal (SFN; others), Yukon non-aboriginal, total Yukon, other Canadian, Total): Annual	Minto Mine	Direct employment impacts	
	Business		#33 Minto mine operations & capital expenditures by group	Pelly Crossing/Yukon/Canada: Annual	Minto Mine	Direct expenditure impacts
			#34 Minto annual and cumulative capital and	Pelly Crossing/Yukon/Canada Annual	Minto Mine	Direct expenditure impacts

		operations expenditures by group			
		#35 Yukon business names by group	Pelly Crossing/Yukon: Annual	Minto Mine	Direct expenditure impacts on # of Yukon businesses
		#36 Minto royalty payments	SFN/Yukon	Minto Mine/YG	Revenues to governments
		#37 Minto property tax payments and other fees	SFN/Yukon	Minto Mine	Revenues to governments
		#10 Minto & Contractors safety statistics (previously #38)	Site-wide	Minto Mine	Work-related injury
Capacity, Training and Education	Employment & Workforce Development	#42 High level description of programs, events and initiatives to facilitate and enhance skills development and labour force development through employment and preemployment undertakings (including SFN-specific information)	Pelly Crossing/Yukon: Annual	Minto Mine	Commitments to employment and labour force development
		#43 Details of programs, events and initiatives to facilitate and enhance skills development and labour force development through employment and preemployment undertakings (including SFN-specific information)	Pelly Crossing/Yukon: Annual	Minto Mine	Commitments to employment and labour force development
		#44 Description of partnership arrangements with governments to accomplish the above	Pelly Crossing/Yukon: Annual	Minto Mine	Commitments to employment and labour force development

	(including SFN-specific information)			
	#48 School absenteeism	Pelly Crossing/Yukon: Annual	YG Education	Barriers to individual capacity building and deterrents

Appendix 2 – Minto Mine, Summary Timeline

The development of mineral properties rarely follows a straight and simple path from discovery through mining and then to closure and reclamation. Minto Mine is no exception. It has experienced changes of ownership, starts and stops in mine development, and the ongoing expansion of ore reserves on the property, which have extended the expected mine life. Table A2-1 provides key milestones in the progress of the Minto property from discovery through to 2018. A more detailed timeline can be found in the 2014 report. The information gathered in Table A2-1 is drawn from the Yukon Geological Survey, Capstone Mining Corp. historical records and Minto Explorations Ltd. records.

Table A2-1. A Summary Timeline of the Minto Mine

Date	Event
1970s	The Minto claim group is staked by Asarco and Silver Standard Mines
	A group managed by United Keno Hill Mines (UKHM) stakes the adjoining DEF claim group to the north of Minto
Early 1990s	UKHM holdings in the DEF claim group acquired by Falconbridge
	Teck and Asarco each sell their interest in the Minto claims to Minto Explorations Ltd.
1996	Minto Explorations Ltd. begins the development of the mine
1997	SFN signs final land claim agreement that includes much of the Minto Mine area as Category A Settlement Land (surface and subsurface rights)
	SFN and Minto Explorations Ltd. sign a comprehensive cooperation agreement
1998	Type A water licence issued
1999	Mineral production licence issued and construction started
2000	Before construction is suspended due to low mineral prices, the access road is complete, sites are prepared for the camp and mill, and some mill equipment is purchased
2005	Sherwood Mining Corporation acquires Minto Exploration Ltd.
2006	Mine development begins
2007	Commercial production is achieved
2008	Sherwood merges with Capstone Mining Corp.
2009	Revised cooperation agreement between Minto Explorations Ltd. and SFN is signed; it includes a net smelter return of between 1.0% and 1.5% on production, plus various commitments in respect of employment, contracting, training, scholarship opportunities and other matters
2010	Phase IV expansion project proposal submitted to the YESAB
2011	Decision documents from the Government of Yukon and SFN issued on Phase IV expansion
2012	Underground development commenced
2013	Phase V/VI expansion project submitted to the YESAB
2014	Open-pit mining suspended; milling continues using a blend of ore from underground and stockpiles
	YESAB issued recommendations for Phase V/VI expansion, the Government of Yukon and SFN issued YESAA decision documents on Phase V/VI expansion and the Government of Yukon issued an amended Quartz Mining Licence
2015	Water Use Licence renewal issued

2016	Minto North Pit was completed in October 2016. Minto applied for authorization to Government of Yukon for mining of Area 2 Stage 3 pit (part of Phase V/VI expansion). Approval granted by Government of Yukon in December 2016.
2017	Phase VII expansion project submitted to Yukon Water Board and Government of Yukon (EMR) for approval
2018	Phase VII expansion project approved by Government of Yukon in March 2018
	October 2018 Minto Mine enters temporary closure